

Company ENVIRONMENTAL SCIENCE AND ENGINEERING SOLUTIONS

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December 3, 2010

Ms. Patricia Coppolino
Vermont Department of Environmental Conservation
Waste Management Division
Sites Management Section
103 South Main Street
Waterbury, Vermont 05671

Re:

Limited Phase II Environmental Site Assessment Report: Stage I Former Jard Company Site, Bennington, Vermont JCO #3-2218-3

Dear Trish:

The Johnson Company is pleased to present the following Limited Phase II Environmental Site Assessment Report to the Vermont Department of Environmental Conservation (VT DEC). This report discusses the findings of the Stage I investigation conducted at Former Jard Company Site in Bennington, Vermont, as proposed in a work plan dated June 3, 2010. The Stage I investigation included an assessment of polychlorinated biphenyl (PCB) migration in groundwater from the Former Jard Company Site and an assessment of the presence of PCB-and bis(2-ethylhexyl)phthalate-containing non-aqueous phase liquid at the Site.

If you would like to discuss the findings of this report, please do not hesitate to contact me at 229-4600. Thank you for the opportunity to be of assistance on this project.

Sincerely,

THE JOHNSON COMPANY, INC.

Bv:

Daniel P. Baston Project Manager

Attachment

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Limited Phase II Environmental Site Assessment

Former Jard Company Site Bowen Road Bennington, Vermont

December 2010

Prepared for:

Vermont Department of Environmental Conservation

103 South Main Street

Waterbury, Vermont 05671



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Ву:	
	Daniel P. Baston Project Manager

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EXECUTIVE SUMMARY

The Johnson Company was contracted by the Vermont Department of Environmental Conservation (VT DEC) to perform limited Phase II Environmental Site Assessment (ESA) activities at the Former Jard Company Site located on Bowen Road in Bennington, Vermont (the Site). The site was owned by the Jard Company, a maker of capacitors, non-fluid transformers, and household appliance motors, until it declared bankruptcy in 1989. There is no current owner of the Site.

Numerous investigations have been conducted at the Site, beginning in 1989 (Wehren, 1989). These investigations have focused primarily on polychlorinated biphenyls (PCBs) and bis(2-ethylhexyl)phthalate (also called di(2-ethylhexyl)phthalate, or DEHP) in shallow soils, groundwater, and building materials at the Site. As a result of these investigations, soils have been removed from multiple locations on the Site, the former Jard Company facility has been demolished, and a cap has been placed over the former footprint; these activities were led by the U.S. Environmental Protection Agency (EPA) and VT DEC to prevent imminent threats to human health and the environment. No groundwater remediation has occurred.

While previous investigations focused on the human health risk potential for direct contact with PCBs, this investigation focused on the horizontal extent of off-site migration of PCBs in groundwater, including potential discharges to local surface water bodies, and the potential for PCBs to exist as subsurface dense non-aqueous phase liquid (DNAPL) beneath the Site.

To accomplish these objectives, The Johnson Company installed twelve soil borings (eleven of which were completed as monitoring wells) and nine piezometers over an approximately 20-acre area. Soil sampling and hydrophobic dye testing were performed during installation of the soil borings to assess potential DNAPL presence. Groundwater samples were collected from twenty-two monitoring wells, five piezometers, two residential supply wells, and a basement drain pipe. Water levels were measured at 34 locations.

Results of the investigation show the presence of a PCB plume in groundwater, appearing to originate in the vicinity of MW-3, near the southern edge of the former building location. PCBs were detected at 14,000 μ g/L in MW-3 and at 1.8 μ g/L in the most downgradient well sampled, a private well at a Park Street residence approximately 1,200 feet downgradient of MW-3.

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The presence of PCB DNAPL beneath the Site is indicated by the results of hydrophobic dye testing, soil sampling, the presence of accumulated free product in the sump of MW-3, PCB concentrations in groundwater relative to solubility limits, and the depth of PCB detections in groundwater. In addition, NAPL entrained in a groundwater sample collected from MW-3 was found to be lighter than water, indicating the presence of lighter-than water NAPL (LNAPL) at the Site. The top of a silty clay layer was observed at approximately 29.5 to 32.5 feet below ground surface in borings installed on and off-site. This layer may have limited the downward migration of DNAPL at the Site.

Based on the findings of this investigation, and discussions with VT DEC regarding their concerns, The Johnson Company has provided recommendations at the end of this report for VT DEC consideration which further investigate the potential for human exposure to PCBs in groundwater and surface soils, and provide additional definition of the nature and extent of PCB contamination in the DNAPL source area and downgradient in groundwater and surface water.

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1. INTRODUCTION

1.1. BACKGROUND

The Johnson Company was contracted by the Vermont Department of Environmental Conservation (VT DEC) to perform limited Phase II Environmental Site Assessment (ESA) activities at the Former Jard Company Site located on Bowen Road in Bennington, Vermont (the Site; see Figure 1). The presence of high concentrations of polychlorinated biphenyls (PCBs) and bis(2-ethylhexyl) phthalate (also called di(2-ethylhexyl) phthalate, or DEHP) in soils and groundwater at the Site has been documented in previous investigations. In general, previous investigations and associated remedial actions have addressed PCB contamination in building materials, shallow soils, and shallow groundwater at the Site in an effort to mitigate imminent risks to human health and the environment; however, limited work had been done to assess off-site migration of PCBs in groundwater and potential discharges to surface water. Pure PCBs have been characterized as dense non-aqueous phase liquid (DNAPL), which can migrate to depths significantly below the water table, and possibly spread laterally on fine-grained soil layers or exist as disconnected stringers. DNAPLs can be a long-term source of dissolved phase contamination in groundwater (Kueper, 2003). Although previous investigations contained limited observations of NAPL (e.g. Lockheed Martin, 2000), the lack of deeper soil borings or monitoring wells at the Site has limited the scope of any conclusions about the presence or distribution of DNAPL.

During an on-site groundwater sampling event in December 2009 performed by ECS, two samples were collected from surface water bodies apparently downgradient of the Site for laboratory analysis of twelve coplanar or "dioxin-like" PCB congeners (EPA Method 1668A). One sample was collected from the Roaring Branch of the Walloomsac River, downstream of the Park Street Bridge and approximately 750 feet west-northwest of the Site. A second sample was collected from a small (approximately 0.2-acre), shallow pond located on the eastern side of Park Street (the "Duck Pond," see Figure 2), approximately 850 feet northwest of the Site. Four of the twelve targeted PCB congeners were detected in one or both of the samples at levels below 1 nanogram per liter (ng/L). The detection of PCBs in these samples indicated to the VT DEC that

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the potential may exist for dissolved phase PCBs in groundwater to impact neighboring surface water, including the Duck Pond, an unnamed tributary to Furnace Brook on the north side of Bowen Road, and a wetland to the west of residential properties along Park Street. However, additional characterization of groundwater flow directions and PCB concentrations in groundwater was required to determine which surface water body or other receptors, if any, were at risk.

1.2. SITE DESCRIPTION

The Site consists of the western portion of an approximately 33-acre parcel located on the southern side of Bowen Road approximately 1,300 feet southeast of the intersection of Bowen Road and Park Street in Bennington, Vermont. For the purpose of this report, the western portion of this parcel is considered independently from additional land to the east also formerly owned by the Jard Company, as shown on Figure 2.

Properties surrounding the Site reflect a mixture of residential, industrial, and public land uses. The Site is bordered to the south by a levee constructed alongside the Roaring Branch of the Walloomsac River, which flows to the west and northwest; to the north by the former US Tsubaki plant now leased by Plasan North America; to the west by the Bennington Little League fields; and to the east by vacant land owned by the Town of Bennington (formerly owned by the Jard Company). The levee along the Roaring Branch was previously located approximately 90 feet north of the northern edge of the river, but was moved approximately 40 feet north in the summer of 2010 as part of a floodplain restoration project to allow the river to access more of the historical floodplain and reduce future flood damage (Bennington Select Board, 2010). Approximate former and current positions of the levee in the vicinity of the Site are shown on Figure 2.

The Site was initially developed in 1969 by the Jard Company, which used the property for the manufacturing of small capacitors, small non-fluid transformers, and small motors (Wehran, 1989). Manufacturing was conducted in an approximately 120,000-square foot building (the approximate former outline of this building is shown on Figure 2). In 1989, Jard

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declared bankruptcy, and the Site has no current owner. Surface soils have been removed from portions of the Site during several United States Environmental Protection Agency (EPA)-led removal actions between 1992 and 2007. The building was demolished in 2006 under the supervision of the EPA (EPA, 2006), and an earthen cap was installed over the former building site in 2007 (EPA, 2007).

Capacitors manufactured at the facility were coated with zinc and, until 1978, filled with oils containing polychlorinated biphenyls (PCBs). Initially, Aroclor 1242 was used in the manufacturing process, but this was reportedly replaced by Aroclor 1016 in 1971 (VT AEC, 1976). Significant quantities of PCBs were used at the Site: Jard reportedly received an average of 550,000 pounds of PCBs annually from 1971 to 1974 (VT DEC, 1991). In 1978, the use of PCBs was ceased and replaced with DEHP, historically referred to as dioctyl phthalate, or DOP (VT DEC, 1991). In addition to PCBs and DEHP, the plant made use of oils, degreasers, solvents, and paints during manufacturing processes. These substances, which included petroleum constituents, chlorinated compounds (trichloroethene and 1,1,1-trichloroethane), and zinc, in addition to PCBs and DEHP, may have been released to soil and groundwater through a number of subsurface structures, including dry wells, underground storage tanks, subsurface vaults, floor drains, and a leachfield. Multiple subsurface structures were identified during previous investigations. However, because investigations at the Site began after the facility had been abandoned by the Jard Company, the purpose and historical use of these structures is not clear. However, the potential exists for PCBs to have been released to the subsurface at multiple locations within the Site.

1.3. INVESTIGATION OBJECTIVES

As described in the Scope of Work dated June 3, 2010, investigation activities at the Site have been divided into multiple phases. Future stages of work will be developed in consultation with VT DEC. The objectives of Stage I of The Johnson Company's limited Site investigation were to evaluate:

• the horizontal extent of off-site PCB transport in groundwater;

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- whether PCB-containing groundwater is discharging to nearby surface water bodies, including the Roaring Branch, Duck Pond, and unnamed tributary to Furnace Brook; and
- whether DNAPL is present at the Site.

These objectives were accomplished through the installation and sampling of soil borings, shallow monitoring wells, deep monitoring wells, and piezometers. Stage II of the investigation will be developed following review of the data described in this report.

2. SOIL SAMPLING

2.1. SOIL SAMPLING PURPOSE AND GENERAL APPROACH

Soil sampling conducted at the Site during previous investigations focused on shallow soil contamination by PCBs that could pose a direct contact risk to persons occupying the Site. As a result of these investigations, identified contaminated shallow soils containing PCBs have been removed or covered by an earthen cap. Deeper soil sampling was not conducted because of the focus on addressing direct contact risks and the high percentage of cobbles in subsurface soils did not allow collection of samples using hollow stem auger or direct push drilling techniques. Therefore, little geologic information was available about the Site at depth, including any information regarding the presence of geologic features that could influence DNAPL migration (e.g., layers of fine-grained soil deposits).

Soil borings were completed at twelve locations in this investigation (shown on Figure 2 as one soil boring and 11 monitoring well locations). Seven "shallow" borings were completed at approximate depths of 15 to 20 feet below ground surface (ft bgs); five "deep" borings were completed immediately above an apparent confining layer at a depth of approximately 30 to 35 ft bgs. Three of these deep borings (MW-3D, MW-4D, and MW-6D) were collocated with existing shallow monitoring wells. General objectives of the soil borings were as follows:

- to install monitoring wells at selected locations (monitoring wells are further described in Section 3.2);
- to assess the presence or absence of PCB-containing DNAPL at the Site using observations of staining, hydrophobic dye testing, and laboratory analysis of

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- recovered soils for PCBs and DEHP; and laboratory analysis of groundwater samples collected from paired (shallow/deep) monitoring wells for PCBs and DEHP; and
- to improve geologic characterization at the Site by using a drilling technique that would enable collection of continuous core samples; in particular, to determine whether an impeding or confining layer is present beneath the Site that would potentially arrest and/or redirect downward migration of any DNAPL present.

Hydrophobic dye testing and observations of staining were used to select samples for laboratory analysis, as described below.

2.2. SOIL SAMPLING LOCATIONS

Soil boring and monitoring well locations installed by The Johnson Company in the 2010 investigation are described in Text Table 2.2.1, below. All soil borings and existing monitoring well locations are presented on Figure 2 (2010 locations are noted). The Scope of Work dated June 3, 2010 specified that three deep borings would be installed on-site, with an additional two borings being completed off-site if DNAPL was observed in the on-site borings. Four deep soil borings were installed on the Site to assess DNAPL presence within an area of known groundwater contamination (MW-3D and SB-16), and a location upgradient (MW-4D) and downgradient (MW-6D) of this area. One deep boring was installed off-site to assess the extent of an apparent confining layer observed on the Site, and to provide a means of comparing concentration changes with depth at a downgradient location. Off-site shallow soil borings (MW-7 through MW-13) were installed primarily for the purpose of sampling groundwater downgradient of the Site, as described in Section 3.2. After an apparent confining layer was encountered at a shallower depth than expected (approximately 29.5 to 32.5 ft bgs) in the initial on-site wells and one additional off-site deep boring (MW-3D, MW-4D, MW-6D, and MW-9D), the Scope of Work was modified following consultation with VT DEC, and an additional soil boring (initiated as SB-15, but changed to SB-16 after refusal was encountered at 8 ft bgs) was completed on-Site to evaluate the extent of DNAPL in the vicinity of MW-3.

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Text Table 2.2.1 Soil Boring Locations			
Location Name	Description	Installation Rationale	
MW-3D	Southern end of former building location, paired with existing MW-3	Evaluate potential presence of DNAPL through direct observation and concentration trends with depth; water table well MW-3 has consistently shown highest PCB concentrations in groundwater	
MW-4D	Eastern end of former building location, paired with existing MW-4	Evaluate potential presence of DNAPL	
MW-6D	Western end of former building location, paired with existing MW-6	Evaluate potential presence of DNAPL through direct observation and concentration trends with depth	
MW-7	Northern bank of Roaring Branch	Evaluate PCB concentrations at location potentially downgradient of Site	
MW-8	Southwestern corner of Little League property	Evaluate PCB concentrations at location potentially downgradient of Site	
MW-9	Western edge of Little League property, paired with new well MW-9D	Evaluate PCB concentrations at location potentially downgradient of Site	
MW-9D	Western edge of Little League property, paired with new well MW-9	Evaluate potential presence of DNAPL using dissolved-phase concentration trends with depth	
MW-10	Little League parking lot	Evaluate PCB concentrations at location potentially downgradient of Site	
MW-11	Northeast edge of Little League property	Evaluate PCB concentrations at location potentially downgradient of Site	
MW-12	North side of Plasan driveway	Evaluate PCB concentrations at location potentially downgradient of Site	
MW-13	Adjacent to Duck Pond	Evaluate PCB concentrations in groundwater potentially discharging to Duck Pond	
SB-15/16	South of MW-3D (first attempt and second attempt, only SB-16 is mapped on Figure 2)	Evaluate extent of NAPL encountered during drilling of MW-3D	

2.3. SOIL SAMPLING METHODS

2.3.1. Soil Borings

Under supervision of The Johnson Company, soil borings were completed by Boart Longyear Drilling Services during the weeks of July 26 and August 2, 2010. All borings were completed using a track-mounted rotosonic drill rig. The rotosonic drilling method was employed because of its ability to achieve high-percentage soil recovery in difficult drilling

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terrain. This type of drill rig operates by vibrating the entire drill string at high frequency. As the drill string vibrates, it is rotated to distribute the energy of the vibrations evenly along the circumference of the bit. The resonance induced by this vibration allows the bit to advance more rapidly through the subsurface by shearing fine-grained materials and fracturing coarser materials (cobbles and boulders). The drill rig was configured to use a 6-inch diameter outer casing. Soils were sampled continuously during drilling using a 5-foot long, 4-inch diameter core barrel installed inside the outer casing. Recovered soils were emptied into a plastic sleeve for geologic logging, sampling, hydrophobic dye testing, and screening for the presence of volatile organic compounds (VOCs) with a photoionization detector (PID). Although PCBs and DEHP would not be expected to produce a PID response, monitoring was performed due the reported presence of VOCs at the Site.

Water used for drilling was stored in 250-gallon polyethylene tanks. The tanks were filled from a fire hydrant on Bowen Road adjacent to the Site. A sample was collected from one of these water tanks for analysis of PCBs by EPA Method 8082 and DEHP by EPA Method 8270D. No targeted analytes were detected in the tank water sample.

2.3.2. Hydrophobic Dye Testing

During the drilling of deeper monitoring wells, hydrophobic dye testing was performed to assess the presence of DNAPL. This is a qualitative field screening method employing a dye powder that dissolves only in hydrophobic substances (e.g., oils and fats), producing a deep red color. The powder does not dissolve in water and will produce no color in the absence of hydrophobic substances. One to four dye tests were performed for each 5-foot interval of recovered soils below a depth of 10 ft bgs. For each test, approximately 10 grams of soil were collected as a composite of recovered soils (excluding gravel and cobbles). Where visible evidence of contamination, such as staining, was noted, soils were collected from the area of contamination. Soils were placed in a clean 40-mL glass container, to which approximately 0.5 gram of hydrophobic dye (Oil-Red-O) and 15 mL of distilled water was added. The jar was then manually agitated to facilitate contact between the dye and any NAPL present.

2.3.3. <u>Laboratory Sample Collection</u>

Text Table 2.3.3 summarizes the soil samples collected for laboratory analysis. Soil samples were initially collected for analysis of PCBs only, but after the discovery of stained soils during the drilling of MW-3D, DEHP was added to the sampling program after consultation with VT DEC. Soil samples were collected in 4-ounce amber jars, placed on ice, and submitted by courier to Eastern Analytical, Inc. (EAI) of Concord, New Hampshire for analysis of PCBs and DEHP. PCB samples were analyzed by EPA Method 8082 with Soxhlet extraction and DEHP samples were analyzed by EPA Method 8270D.

Text Table 2.3.3 Summary of Soil Samples			
Boring Name	Sample Collection Depth	Analytes	Rationale
MW-3D	10 – 15 ft	PCBs, DEHP	Black staining, tar-like odor, visible red coloration during dye test
MW-3D	20 – 25 ft	PCBs, DEHP	Visible red coloration during dye test
MW-3D	25 – 25.5 ft	PCBs, DEHP	Visible red coloration during dye test
MW-4D	30 – 35 ft	PCBs	Bottom of boring; no evidence of contamination in boring
MW-6D	20 – 25 ft	PCBs	Slight visible red coloration during dye test
MW-6D	30 – 35 ft	PCBs	Bottom of boring
MW-9D	25 – 30 ft	PCBs, DEHP	Bottom of boring
MW-10A	1.6 – 2.6 ft	PCBs, DEHP	Black staining, tar-like odor
SB-16	10 – 15 ft	PCBs, DEHP	Visible red coloration during dye test
SB-16	25 – 30 ft	PCBs, DEHP	Bottom of boring

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2.4. SOIL SAMPLING RESULTS

2.4.1. <u>Geologic Observations</u>

Boring logs are included in Appendix B. Geologic observations have been summarized in two cross sections. Cross section locations are shown on Figure 3a; cross sections are presented on Figures 3b and 3c. Multiple drilling attempts were necessary to reach the targeted depths at several locations due to the presence of large cobbles and boulders in the subsurface. Three drilling attempts were made at MW-10, and these borings were logged as MW-10A, MW-10B, and MW-10 (the completed boring). Similarly, refusal was encountered at a shallow depth (8 ft bgs) during drilling of SB-15, so an additional adjacent boring (SB-16) was completed to the targeted depth.

The Site and surrounding area considered in this investigation are underlain predominantly by poorly sorted glacial drift to a depth of 29.5 to 32.5 feet, at which an apparent confining layer was encountered (sandy silt, silty clay, and/or clay).

Surficial soils generally consist of a thin layer of fine to medium sand with some silt and organic material. This layer ranges from non-existent to 2.5 feet thick, and is thickest to the north of the Site. This surficial layer is underlain by the aforementioned poorly sorted glacial drift. Grain-size in the drift ranges from trace silt and clay to cobbles and boulders. Sand occurs throughout, ranging in size from fine to coarse. The cobbles are a massive, vitreous, white or pink to buff colored quartzite. Granular structure and bedding planes are visible in the larger stones. Some gravel pieces are clearly angular pieces of larger cobbles, and some pieces were fractured with pressure applied by hand. The sand appears to be predominantly of same material as the gravel and cobbles, and is found mostly as the matrix between larger grains, although several sand lenses of various grain size and thickness are noted at different depths. The material is generally poorly sorted, with occurrences of cobbles and trace silt found throughout the drift layer. In the deeper borings, a layer of silty clay to clay was found at depths of 29.5 to 32.5 ft bgs. In all deeper borings, an abrupt transition from sand to silt or clay was noted at this depth;

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below this transition, the material became progressively finer, with concomitant increases in material plasticity and durability.

2.4.2. Visual Indications of Contamination

Stained soils were observed predominantly in the vicinity of MW-3; heavy black and gray staining was noted from approximately 5 to 17 feet below ground surface (see Photo 3). Similar staining was observed on SB-16, but within a more limited interval (1.7 to 3.5 ft bgs). The stained soils were noted to exhibit a tar-like odor.

A limited area of staining was observed in MW-10A and MW-10B (initial drilling attempts for MW-10). In MW-10A, stained soils were observed from approximately 1.6 to 2.6 ft bgs; staining in MW-10B was from approximately 1.6 to 2.2 ft bgs. The stained soils were noted to exhibit a tar-like odor. No staining was observed in MW-10.

2.4.3. Hydrophobic Dye Testing Results

All hydrophobic dye test results are presented in Table 1. The results of the dye testing are generally not considered to be quantitative. However, the pattern of staining in the vial can give an indication of relative DNAPL saturations; at lower saturations, red staining will appear as streaks or smears on the vial of the wall only, while at greater saturations, stained NAPL will begin to accumulate in the bottom of the vial. Low saturations of DNAPL (< 2%) may not produce sufficient discoloration to visually determine the presence of DNAPL. In the soils encountered in this investigation, higher DNAPL saturations initially produced smearing and floating red-stained droplets; several days were required for the droplets to accumulate at the bottom of the vial.

Red staining indicative of DNAPL was detected in soils from three borings: MW-3D, MW-6D, and SB-16. The greatest vertical extent of DNAPL observed was in MW-3D, where dye testing indicated the presence of DNAPL in all intervals tested (see Photo 2 in Appendix A). DNAPL droplets were observed in samples from 10-15 ft bgs, 15-20 ft bgs, and 20-25 ft bgs. Streaks were observed on the side of the vial containing soil from 25-30 ft bgs, but no droplets were observed.

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In MW-6D, dye tests from only one interval (20-25 ft bgs) indicated the presence of DNAPL. Two tests were initially performed at this location, showing slight red coloration on the walls of the vial. Two additional tests were performed, with no visible red coloration at the time of testing; however, after the passage of several weeks, slight red coloration was present in all four vials.

In SB-16, red droplets and smearing were observed in the dye test performed on soils from 10-15 ft bgs, but no red coloration was noted in soils from any other interval.

2.4.4. Laboratory Results

Laboratory results from soil samples are presented in Table 2 and shown on Figure 4. PCBs were detected in soil samples collected from MW-3D, MW-6D, and SB-16; no PCBs were detected in samples from MW-4D or off-site locations MW-9D and MW-10A. All PCBs detected in soil samples were identified as Aroclor 1016 by the laboratory; however, the analyst reported that the sample chromatograms bore similarity to standard chromatograms of both Aroclor 1016 and Aroclor 1242. Aroclor 1016 concentrations were greatest in MW-3D, ranging from 3,000 mg/kg (20.0 – 25.0 ft bgs) to 7,000 mg/kg (25.0 – 25.5 ft bgs). These concentrations, which approach percent-levels, are consistent with the presence of DNAPL.

In MW-6D, Aroclor 1016 was detected at 210 mg/kg at a depth of 20-25 ft, but decreased to 0.19 mg/kg in the deepest sample from the boring (30 – 35 ft bgs). Hydrophobic dye tests indicated the presence of DNAPL in the sample collected from 20-25 ft bgs, but at a lower saturation than the samples collected from MW-3D (i.e., no droplets were present). The dye test did not indicate the presence of DNAPL in the deeper sample.

In SB-16, Aroclor 1016 was detected at 50 mg/kg at a depth of 10-15 ft bgs; hydrophobic dye testing indicated the presence of DNAPL in this sample. However, this reported concentration is two orders of magnitude below those reported in MW-3D, where dye testing results indicated comparable DNAPL saturations. Therefore, PCBs appear to be a less significant component of this DNAPL.

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Only a subset of soil samples was analyzed for DEHP; among these, DEHP was detected in all soils where PCBs were also detected. However, the ratio of DEHP to PCB concentrations varied over approximately two orders of magnitude between the samples. The DEHP to PCB ratio was higher in shallower soil samples (48 in SB-16 (10-15'), 6.8 in MW-3D (10-15)) and lower in deeper soil samples (1.0 in MW-3D (20-25'), 0.5 MW-3D (25-25.5')).

3. GROUNDWATER SAMPLING

3.1. GROUNDWATER SAMPLING PURPOSE AND GENERAL APPROACH

3.1.1. Shallow Monitoring Wells

Seven shallow monitoring wells were installed to evaluate the extent of off-site dissolved PCB migration in shallow groundwater. Results from previous investigations had indicated groundwater flow to the northwest, with detectable concentrations of PCBs in MW-6, near the western boundary of the Site; however, no off-site wells had been installed in this direction.

3.1.2. Piezometers

Nine piezometers were installed in the vicinity of the Site to assess potential discharges of groundwater to the Roaring Branch, Duck Pond, Greene Pond, and an unnamed tributary to Furnace Brook. By comparing water levels inside and outside the piezometer, a determination was made as to whether the surface water body was gaining (receiving groundwater) or losing (discharging to groundwater) at the time of measurement.

3.1.3. Deep Monitoring Wells

Three deep monitoring wells were installed on the Site (MW-3D, MW-4D, and MW-6D) and one deep monitoring well was installed off-site (MW-9D) to evaluate whether DNAPL may be present at the Site and, if so, if a potential confining layer exists that may interrupt its downward migration. In addition to the soil sampling techniques used to assess DNAPL presence (visual observation, hydrophobic dye testing, and laboratory analysis), installation of paired (shallow and deep) monitoring wells provides a means of examining changes in dissolved-phase concentrations with depth (concentration increases with depth would be consistent with DNAPL presence).

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3.1.4. Additional Sampling

During the course of the investigation, a residential property owner on Park Street informed The Johnson Company of a disused shallow well in his basement and requested that a sample be collected from this well for PCB analysis. In consultation with VT DEC, a sample was collected from this well and the outlet of a gravity drain from the basement of the same residence. In addition, VT DEC collected a water sample from the plumbing of another nearby residence that is currently served by a shallow private well.

3.2. GROUNDWATER SAMPLING LOCATIONS

Monitoring well locations are presented on Figure 2. During the 2010 investigation, monitoring wells were installed immediately following soil boring completion at locations MW-3D, MW-4D, MW-6D, MW-7, MW-8, MW-9, MW-9D, MW-10, MW-11, MW-12, MW-13, described in Section 2.2. The shallow monitoring well, deep monitoring well, and piezometer locations are described below.

3.2.1. Shallow Monitoring Wells

Results from previous investigations suggested that groundwater flow across the Site was generally to the northwest. Based on this assessment, six shallow monitoring wells (MW-7 through MW-12) were installed along two adjoining transects: one due north from the northern edge of the Roaring Branch across the Little League fields, and another to the east-northeast from the Little League parking lot to the property occupied by Plasan on the north side of Bowen Road. The positioning of these transects was intended to determine the northerly and southerly extents of any off-site PCB plume in shallow groundwater. In addition, monitoring well MW-13 was installed at the edge of the Duck Pond to evaluate PCB concentrations in groundwater potentially discharging to the pond.

3.2.2. Piezometers

Piezometers PZ-01 through PZ-06 were installed in the Roaring Branch at an approximate spacing of 300 feet, from PZ-01, approximately 100 feet upstream of the Site, to PZ-06, approximately 400 feet downstream of the Park Street Bridge and approximately 1,200 feet downstream of the Site. PZ-12 was installed in an unnamed tributary to Furnace Brook,

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approximately 50 feet north of monitoring well MW-12. PZ-13 was installed in the Duck Pond, approximately 30 feet west of MW-13. PZ-14 was installed in a small pond on a residential property at 403 Park Street (Greene Pond), located west of the Little League fields. This pond was apparently created by damming the roadside ditch adjacent to Park Street; the ditch flows northerly from the Greene Pond along Park Street into the Duck Pond.

3.2.3. <u>Deep Monitoring Wells</u>

Three deep monitoring wells were installed on the Site (MW-3D, MW-4D, and MW-6D). These wells were collocated with existing shallow monitoring wells. As described in Section 2.2, these deep monitoring wells were positioned to assess potential DNAPL presence at locations upgradient of, downgradient of, and within an area of PCB contamination in groundwater. One deep monitoring well (MW-9D) was installed downgradient of the Site. This monitoring well was located to assess the extent of the apparent confining layer observed on the Site, and to provide a means of comparing concentration changes with depth at a downgradient location.

3.2.4. Additional Sampling Locations

Three water samples were collected from a residential property located at 403 Park Street adjacent to the Little League fields (the Greene property). One sample ("Greene Well") was collected from a dug well located inside the basement of the residence. The well was constructed of stone and was approximately 6.5 feet deep and 3 feet in diameter. An additional sample ("Greene Pipe") was collected from a white plastic drain pipe emerging at the northwestern edge of the lawn of this property, emptying into the small pond (Greene Pond, as described in Section 3.2.2; see Figure 2 and Photo 1 in Appendix A). The occupants of the house reported that the pipe was connected to a basement drain. Originally, only one pipe was installed, but a second was added to increase the capacity. A third sample was collected from the kitchen sink faucet by VT DEC personnel (sample name "Greene").

One water sample was collected by VT DEC personnel from a second residential property located at 406 Park Street. This residence is served by a well located in the basement,

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estimated to be approximately 4 feet deep. The sample ("Watson") was collected from a spigot located before the pressure tank in the plumbing system.

3.3. GROUNDWATER SAMPLING METHODS

3.3.1. Monitoring Well Installation

Monitoring wells were installed in eleven borings, including seven wells screened across the water table and four wells screened directly above an apparent confining layer at approximately 30 ft bgs. Depths and screen lengths of the installed monitoring wells are summarized in Text Table 3.1 (below); full construction details are provided in Appendix B. Monitoring wells were constructed of a 2-inch diameter PVC screen with 0.010-inch aperture slots, attached to a 2-inch diameter PVC riser. Nominal 10-foot length screens were used for shallow/water table wells, and 5-foot screens were used for deeper wells (MW-3D, MW-4D, MW-6D, and MW-9D). Filter sand (#0 size) was placed around the screen to a depth of 1 to 2 feet above the top of the screen. In shallow wells, bentonite chips were used to fill the annular space from the top of the sandpack to approximately 0.5 ft bgs. In deeper wells, a 1- to 2-foot thick layer of bentonite chips was placed on top of the sandpack, followed by a mixture of bentonite grout and Portland cement. The cement/grout mixture was pumped into the annular space from bottom to top using a tremie pipe. Monitoring wells MW-3D, MW-4D, MW-6D, and MW-7 were completed above the ground surface using a steel protective well guard. The remaining monitoring wells were completed in a flush-mounted road box installed in a concrete pad.

Text Table 3.1 Well Depths and Screen Lengths			
Well Name	Approximate Total Depth	Screen Length	
MW-3D	28 ft	5 ft	
MW-4D	30 ft	5 ft	
MW-6D	31 ft	5 ft	
MW-7	12 ft	10 ft	

Text Table 3.1 Well Depths and Screen Lengths			
Well Name	Approximate Total Depth	Screen Length	
MW-8	13 ft	10 ft	
MW-9	12 ft	10 ft	
MW-9D	27 ft	5 ft	
MW-10	12 ft	10 ft	
MW-11	12 ft	10 ft	
MW-12	13 ft	10 ft	
MW-13	18 ft	10 ft	

3.3.2. Monitoring Well Development

All newly installed monitoring wells were developed on August 24-25, 2010. During development, water was removed from the wells using a peristaltic pump, inertial valve pump with surge block (Waterra), and/or submersible pump (Grundfos). The volume of water removed from each well ranged from approximately 5 to 55 gallons. All well development water was transferred to 55-gallon drums for appropriate disposal.

3.3.3. Groundwater Elevation Measurement

The depth to groundwater was measured in all accessible and completed monitoring wells on July 29 and August 6, 2010. The depth to groundwater was measured in all monitoring wells on August 30, 2010. Monitoring well MW-3 and the newly installed on-site deep monitoring wells were checked for the presence of free product on August 24, 2010 using a Solinst interface probe. No free product was detected in any of the wells, but the interface probe was noted to feel oily on a gloved hand upon removal from MW-3. On August 30, a Heron interface probe was placed in MW-3, and a layer of free product (i.e., DNAPL) approximately 0.2 feet thick was detected beginning at 12.1 feet below the top-of-casing (depth to water at this time was approximately 9 feet below the top-of-casing). A bailer was then lowered to the bottom of the

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well. An interface between a clear fluid and a brownish fluid was observed in the bailer; however, both fluids had an oily feel.

Monitoring wells EPA-5, EPA-6, EPA-7, and EPA-8 were originally installed through an approximately 10-15 foot high levee along the Roaring Branch. A stream restoration project was completed in this reach of the river during the summer of 2010, a component of which included the excavation of this levee and construction of a new levee closer to the Site. Monitoring wells EPA-5 through EPA-8 remained in place during the excavation; however, the upper portions of the screens of these monitoring wells were found to be significantly above ground surface following excavation. Approximately 0.5 feet to 1.5 feet of screen were exposed on EPA-6 through EPA-8; approximately 5 feet of the screen of EPA-5 were exposed. A water level indicator placed in this well indicated that it was dry. On August 30, 2010, The Johnson Company cut the existing casings of EPA-6 through EPA-8 to a height approximately three feet above ground surface and installed replacement steel well guards around these casings. Although the screen remained above ground surface, the well guards are expected to minimize surface water flow into the wells.

Following this work, the top-of-casing elevations of all intact monitoring wells and piezometers were surveyed by Guntlow and Associates, Inc. of Williamstown, Massachusetts. Geographic coordinates of the wells were recorded by The Johnson Company using a Trimble GPS unit with submeter accuracy. Piezometer PZ-02 was apparently destroyed during construction activities and was not surveyed.

3.3.4. Groundwater Sample Collection

During the week of August 30, 2010, all accessible monitoring wells were purged and sampled using low-flow procedures (except MW-3, where free product was present). Monitoring wells EPA-2, EPA-5, and EPA-9 were dry and could not be sampled. It appeared that obstructions were present in EPA-2 and EPA-9 because measured total depths in these wells were several feet less than had been recorded during a previous investigation (Stone, 2005).

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All samples were collected using a peristaltic pump with dedicated tubing. The intake of the pump was positioned at the approximate midpoint of the saturated screen. Purging was completed at a rate of 100 to 200 milliliters (mL) per minute. During purging, a YSI multiparameter instrument was used to monitor temperature, specific conductance, dissolved oxygen, pH, oxidation-reduction potential (ORP), and a turbidimeter was used to monitor turbidity. Samples were collected after stabilization of these parameters. For quality control purposes, field duplicates were collected from MW-6 and MW-3D.

Due to the known presence of high concentrations of PCBs at MW-3, a multiparameter instrument was not used to monitor parameters during sampling. Instead, a sample was collected after purging three well volumes.

All samples were submitted to EAI for analysis of PCBs by EPA Method 8082 and DEHP by EPA Method 8270D. In addition, a sample collected from MW-3 was submitted to Columbia Analytical Services, Inc. (CAS) of Houston, Texas for analysis of coplanar PCB congeners by EPA Method 1668A. EAI reported a small amount of NAPL in this sample; this NAPL was separated and analyzed for specific gravity using Standard Method (SM) 2710F.

3.3.5. Piezometer Installation and Measurement

Nine piezometers were installed during the weeks of July 26, August 2, and August 23, 2010. Piezometers consisted of a 0.5-foot stainless steel screen (Solinst Model 615) connected to a 5-foot length of 0.5-inch inner diameter polyethylene tubing, within a 5-foot length of 0.75-inch diameter iron pipe. A manual slide hammer was used to drive the piezometer until the top of the screen was approximately 2 feet below the bed of the stream or pond. An electronic water level indicator was used to measure the depth to water inside the polyethylene tubing and outside the metal pipe on July 27, July 28, July 29, August 6, and August 30, 2010. An attempt was made to measure the water levels during a period of relatively high flow after a thunderstorm on August 5, 2010 (see Photo 4 in Appendix A), but the piezometers could not be safely accessed under the high-flow conditions.

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3.3.6. Piezometer Sampling

Samples were collected from piezometers PZ-04, PZ-05, PZ-06, PZ-13, and PZ-14 on August 30 through 31, 2010. Consistent with the Scope of Work dated June 3, 2010, no samples were collected from piezometers PZ-01, PZ-03, and PZ-12 because measured water levels indicated that surface water was recharging groundwater at these locations. Because the water level in the Roaring Branch had retreated beneath the streambed at PZ-04, PZ-05, and PZ-06 on the days samples were collected), it was not possible to determine if the Roaring Branch was losing or gaining at these points, although previous monitoring indicated that PZ-04 was a gaining reach, PZ-06 was a losing reach, and PZ-05 had changed from a losing reach in July to a gaining reach in August. Piezometer PZ-02 was apparently destroyed during construction activities and was not sampled. Piezometers did not yield sufficient flow to collect low-flow samples. Instead, the piezometers were purged dry, and samples were collected from the recharge.

3.3.7. Additional Water Sample Collection Methods

Sample "Greene Well" was collected from a dug well located inside the basement of the residence at 403 Park Street using the low-flow procedures described in Section 3.3.4. Sample "Greene Pipe" was collected from the drain pipe described in Section 3.2.4 by positioning the sample bottles under the end of the pipe to directly capture the discharge. At the time of sampling, the flow from the pipe was measured to be approximately 150 mL/minute. A green-colored pipe emerging adjacent to the white pipe was dry at the time of sampling. During a previous Site visit, both pipes had been observed to be flowing, although no flow rate measurements were collected.

Sample "Greene" was collected by VT DEC personnel by directly filling sampling containers from the faucet of the kitchen sink at the 403 Park Street residence. Sample "Watson" was collected by VT DEC personnel from a spigot located before the pressure tank in the plumbing system. An upstairs tap was run for 10 minutes prior to collecting the sample.

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3.4. GROUNDWATER AND PIEZOMETER SAMPLING RESULTS

3.4.1. Groundwater Flow Direction

Measured groundwater elevations are presented in Table 3. Elevations from August 6 and August 30, 2010 were used to construct water table potentiometric maps (Figures 5 and 6). The hydraulic gradient was generally oriented to the northwest, approximately parallel to the Roaring Branch. Using the interpreted contours, the average water table gradient was calculated to be approximately 0.02 on both August 6 and August 30, 2010 with a gradient direction to the northwest from the Site followed by a possible transition to the west-northwest downgradient of wells MW-10, MW-8 and MW-7. Vertical gradients between all paired monitoring wells were indicative of downward groundwater flow.

3.4.2. Groundwater / Surface Water Interaction

The measured depths to water inside and outside the installed piezometers are presented in Table 4; calculated head differences between the stream and the streambed are presented in Figure 6. In general, measured water levels indicated that the Roaring Branch was a losing stream, with some temporal or location-specific exceptions. Piezometer PZ-04 was the only location where the Roaring Branch was consistently gaining, possibly as a result of its placement immediately below a drop in streambed elevation. Still, water levels differences between the stream and piezometer were relatively small at PZ-04. Water levels in the piezometer installed in the Furnace Brook tributary north of the MW-12 indicated that this stream was losing, while water levels in the Duck Pond and the Greene Pond indicated that these surface water bodies were gaining. This conclusion is further supported by the presence of seeps near the base of the slope above the Duck Pond to the southeast.

3.4.3. DNAPL Observations

An approximately 0.2-inch thick layer of DNAPL was measured in MW-3 using a Heron interface probe; this likely represents an accumulation of DNAPL in the sump of the well and does not correspond to a layer of contiguous DNAPL in the soil. The laboratory reported the presence of a small amount of NAPL in the groundwater sample collected from MW-3 (although DNAPL was present in the bottom of this well, the sample was collected from the middle of the

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saturated screen using a peristaltic pump). The laboratory determined the NAPL to have a unitless specific gravity of approximately 0.98 (i.e. the density of the NAPL was close to but lighter than water). This is consistent with an observation of NAPL lighter than water (LNAPL) during excavation of a test pit in the vicinity of MW-3 during a previous investigation (Wehren, 1991). Previous laboratory analysis of this NAPL demonstrated the presence of a mixture of constituents, including petroleum, chlorinated solvents, PCBs, and DEHP (Wehren, 1991). Therefore, both DNAPL and LNAPL appear to be present at this location.

As discussed in Section 2.4.3, hydrophobic dye testing and soil concentration results from MW-3D provide evidence of the presence of PCB-containing DNAPL at this location. This is not contradicted by the lack of an observed DNAPL accumulation in MW-3D. DNAPL may not significantly accumulate in a monitoring well for many reasons including but not limited to: a capillary pressure barrier created by the slots in the well screen; the lack of sufficient time following drilling for DNAPL to migrate through the filter pack and enter the well; and limited DNAPL thickness and volume at that specific location.

During the development of MW-3D with a manual inertial pump and surge block, apparent oil droplets were noted in the extracted water. The extracted water remained in a 5-gallon bucket for several days, and when the contents of the bucket were emptied into a 55-gallon drum, an apparent oily layer was noted at the bottom of the bucket.

3.4.4. Groundwater Concentrations

All results from groundwater and piezometer sampling are presented in Tables 5 and 6. PCB results are presented on Figure 8 and DEHP results are presented on Figure 9. PCBs were detected at concentrations above the Vermont Groundwater Enforcement Standard (VGES) of $0.5~\mu g/L$ in wells located both on- and off-site. DEHP was detected above the VGES of $6.0~\mu g/L$ in three on-site wells (MW-3, MW-3D, and MW-6D) but was not detected off-site.

Although PCBs do not rapidly degrade in the environment, the congener profile of PCBs in the environment is modified by weathering processes such as dissolution, vaporization, volatilization, dechlorination, and biological alteration (e.g., Johnson et. al., 2006). In samples

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where significant weathering has occurred, the sample chromatogram may differ from Aroclor standards, and it may be difficult to determine which Aroclor the sample chromatogram most closely represents (e.g., Erickson, 1997). In previous investigation, PCBs detected in groundwater have been identified as Aroclors 1016, 1232, and 1242. Even in the absence of severe weathering, it can be difficult to distinguish between these three Aroclors. As a result, different laboratories or analysts may not agree on the determination of PCBs in the same sample. Therefore, laboratory PCB results should be interpreted in the context of the known Aroclor use at the Site, which consists of Aroclor 1242 before 1971, and Aroclor 1016 from 1971 to 1978. (VT AEC, 1976; VT DEC, 1991.) In particular, laboratory results reported as Aroclor 1232 in samples from previous investigations and this investigation are more likely to be Aroclors 1016 and/or 1242, based on this history of the Site and the lack of reported use of Aroclor 1232 as a dielectric fluid (Johnson et. al., 2006).

Aroclor 1016 was used exclusively as a dielectric fluid in capacitors (Johnson et al, 2006). In addition to its use in capacitors, Aroclor 1242 was used in heat transfer and hydraulic fluids, carbonless copy paper, and in plasticizers and adhesives. In capacitor applications, Aroclors 1242 and 1016 are reported to have similar properties, and almost all capacitor use switched from Aroclor 1242 to Aroclor 1016 when the latter was introduced in 1971. According to a representative of the Jard Company, the switch was made in an effort to avoid the environmental persistence of the Aroclor 1242 (Rollins, 1975).

Aroclors 1016 and 1242 both have low solubilities in water; reported solubilities for these two formulations are 420 μ g/L and 240 μ g/L, respectively (Erickson, 1997). Although these values are low, Aroclors 1016 and 1242 are among the most soluble PCB formulations: for example, the reported solubilities of the more heavily-chlorinated Aroclors 1254 and 1260 are 52 μ g/L and 3 μ g/L, respectively. All PCBs are hydrophobic and would be expected to adsorb strongly to organic carbon in soils. However, Aroclors 1016 and 1242 are less hydrophobic than Aroclors 1254 and 1260; octanol-water partition coefficients for Aroclors 1016 and 1242 exceed those for 1254 and 1260 by an order of magnitude or more (ATSDR, 2000). As a result,

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Aroclors 1016 and 1242 in would be expected to migrate farther than Aroclors 1254 or 1260 in groundwater.

Although PCBs are likely to be present in soils in multiple areas of the Site, groundwater analytical results suggest that a source in the vicinity of MW-3 / MW-3D has the greatest impact on groundwater. The highest reported PCB concentration was in the sample collected from MW-3, where the laboratory identified Aroclor 1232 at a concentration of 14,000 μ g/L. This result from is generally consistent with previous results from Stone (2005) and TRC (1992), as shown in Text Table 3.2 below:

Text Table 3.2 PCB Results from MW-3			
Investigation	Sample Date	Result	Concentration
JCO, 2010	9/2/2010	Aroclor 1232	14,000 μg/L
ECS, 2009	12/3/2009	Aroclor 1016	666 μg/L 1,980 μg/L (duplicate)
Stone, 2005	8/1/2005	Aroclor 1232	13,000 μg/L
TRC, 1992	8/18/1992	Aroclor 1232 or 1016	13,000 μg/L
Wehran, 1991	6/13/1990	Aroclor 1242	Aqueous phase: 280,000 μg/L 390,000 μg/L (duplicate)
			Oil phase: 2,500 mg/kg 3,100 mg/kg (duplicate)

The PCB concentrations reported in Text Table 3.2 are greatly in excess of reported measured solubility values of Aroclors 1016, 1232, and 1242, all of which are less than 500 μ g/L (e.g. Erickson, 1997; ATSDR, 2000).

At some sites, the reason for the presence of "dissolved" PCB concentrations in excess of theoretical solubility is the presence of high humic materials content in the sample; PCBs adsorb strongly to humic materials but can be released during the extraction process. This is likely not

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the case at the Site: although the samples were not analyzed for humic materials, the analyst reported no indication of humic acids on the chromatogram for 8270D analysis. Another potential explanation is the in-situ formation of an emulsion (i.e., a mixture of oil droplets suspended in water, or water droplets suspended in oil). Emulsions are often associated with the presence of surfactants; however, PCB-water emulsions have been shown to form even in the absence of surfactants: this type of emulsion is known as a Pickering emulsion. The formation of stable PCB-water Pickering emulsions using bentonite as a stabilizer was demonstrated in the laboratory by Roy-Perreault et al. (2005). This is consistent with observations in the field that fluid removed from MW-3 had an oily texture; therefore, it is possible that fluid in MW-3 may consist of an oily mixture of PCB-containing oil and water, allowing the appearance of dissolved PCBs at concentrations higher than theoretical solubility limits.

Although the horizontal and vertical extent of the PCB source area near MW-3 remains unclear, concentrations observed downgradient of this point suggest the presence of a dissolved-phase PCB plume extending at least 1,200 feet downgradient, where PCBs were detected in plumbing connected to a shallow private well (Watson Well). The width of the plume (defined as PCB concentrations above the detection limit) is approximately 500 feet in width where is crosses the shallow monitoring well transect defined by MW-7 through MW-12.

Congener-specific analysis of the MW-3 sample indicated the presence of 11 out of 12 coplanar, or "dioxin-like" PCBs; only PCB-169 was not detected in the sample. As shown in Table 6, the TEQ is calculated by multiplying the concentration of each dioxin-like congener by the toxicity equivalency factor (TEF), which indicates how toxic that congener is compared to a reference dioxin, 2,3,7,8-TCDD. The resulting TEQs for the 12 congeners are summed and the total TEQ is compared against the VGES for 2,3,7,8-TCDD. The dioxin-like congeners make up a small portion of the total PCB mass (approximately 0.4%) in the MW-3 sample. PCB-77 and PCB-118 were the most abundant coplanar congeners identified in the sample, at 23.7 μ g/L and 19.5 μ g/L, respectively. However, the total toxic equivalent (TEQ) to 2,3,7,8-dibenzo-p-dioxin (2,3,7,8-TCDD) is driven largely by the presence of PCB-126, at 0.0918 μ g/L; this congener,

which is identified by the World Health Organization as the most toxic dioxin-like congener, contributes 72% of the total TEQ.

PCBs were not detected in the three piezometers sampled in the Roaring Branch during a period of relatively low flow in which the Roaring Branch was gaining at the sampled locations. Assuming these low flow conditions also represent a time of maximum potential for groundwater discharge into Roaring Branch, then it may also be assumed that the potential for PCB discharge at higher flow conditions would be even less. However, additional seasonal monitoring should be considered to more accurately confirm these assumptions.

The lack of detectable PCB concentrations in MW-13 or PZ-13 indicates that the presence of PCBs in the Duck Pond may not be attributable to widespread groundwater discharge at the eastern edge of the pond. However, PCBs were detected in PZ-14 (located in the Greene Pond) as well as in flow collected from the drain pipe emerging at the edge of the Greene property, which discharges into the Greene pond. Because the outflow of the Greene pond flows alongside Park Street to the Duck Pond, groundwater discharge in the vicinity of the Greene property may be a significant mechanism of PCB transport to the Duck Pond.

Further investigation is required to explain the detection of PCBs in MW-12 at 40 μ g/L, the highest reported off-site concentration. Interpreted potentiometric contours do not suggest that MW-12 is directly downgradient of the apparent source near MW-3. Further, PCBs were not detected at elevated concentrations in groundwater between MW-3 and MW-12: PCBs were detected at 0.7 μ g/L in MW-1 during the current investigation, but this is much lower than the detection at MW-12, and no PCBs were detected in a sample collected from the now-destroyed supply well (previously located between the former Site building and Bowen Road) during a previous investigation, although this well was reported to be 36 feet deep, so it was likely screened below the nearby monitoring wells (Stone, 2005). In addition, PCBs were not detected in a sample collected from a monitoring well installed approximately 200 feet southeast of MW-12 during an investigation at the former U.S. Tsubaki facility (Tighe & Bond, 2001).

The geologic profile A-A' in Figure 3b illustrates that DEHP is present in shallow groundwater at MW-3 and has migrated to lower depths in the same area, but its downgradient impacts are limited to deep groundwater within approximately 500 feet of this area. Pure DEHP has a specific gravity of 0.99 at 20 degrees Celsius and tends strongly to adsorb to clays and sediments (EPA, 2010). The reported DEHP concentration of 450 µg/L in the MW-3 sample approaches or exceeds most literature values of solubility (a range of values in literature of 1.1 to 1,200 µg/L was reported by Staples et al., 1997).

4. SUMMARY

This Limited Phase II Environmental Site Assessment included completion of soil sampling and hydrophobic dye testing to assess the potential presence of PCB-containing DNAPL in soils at the Site; and installation of monitoring wells and piezometers to assess off-site transport of PCBs in groundwater, including potential discharges to surface water. The results of this investigation are summarized in the sections below.

4.1. PCB TRANSPORT IN GROUNDWATER

The combined results of groundwater samples collected from twenty-two monitoring wells, five piezometers, two residential supply wells, and a basement drain pipe, and water levels from 34 locations show the presence of a PCB plume appearing to originate in the vicinity of MW-3 and migrating in a northwesterly direction across the Little League fields to Park Street. The highest PCB concentration reported was 14,000 µg/L in MW-3. The plume (defined as PCB concentrations above the detection limit) is approximately 500 feet in width where it crosses the shallow monitoring well transect installed during this investigation. The downgradient extent of PCB migration in groundwater was not defined; however, PCBs were detected in plumbing connected to a shallow private well approximately 1,200 feet downgradient of MW-3.

PCBs do not typically migrate extensively in the dissolved phase due to their low solubility and strong tendency to adsorb to soil (ATSDR, 2000). The detection of dissolved-phase PCBs in shallow groundwater significantly downgradient of the Site suggests that conditions are present that facilitate the transport of PCBs, possibly by enhancing their solubility.

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PCBs were detected in wells installed at the water table and above a silty clay layer at approximately 30 feet bgs. The highest PCB concentration reported in deeper wells was 110 µg/L in MW-3D. Vertical gradients between all paired monitoring wells were indicative of downward groundwater flow.

There does not appear to be significant migration of dissolved-phase PCBs to the Roaring Branch, even though reaches downstream of the Site were recharged by groundwater at the time of sampling.

Direct groundwater discharge to the Duck Pond may not be the source of the previous PCB detection in the Pond. However, results indicate that PCB-containing groundwater is entering the Greene Pond, both directly, through the bed of the pond, and indirectly, through a basement drain pipe. Given that the Greene Pond discharges into a small stream which flows into the Duck Pond, groundwater discharge to the Greene Pond may have contributed to the previous detection of PCBs in the Duck Pond.

The detection of PCBs at $40 \mu g/L$ in MW-12 does not appear to be directly connected to the on-site PCB source area near MW-3. Additional investigation is necessary to determine the cause of this detection.

4.2. PRESENCE OF PCB DNAPL

The presence of PCB DNAPL beneath the Site is indicated by the results of hydrophobic dye testing, soil sampling, the presence of accumulated free product in the sump of MW-3, PCB concentrations in groundwater relative to solubility limits, and the depth of PCB detections in groundwater. Of the four deep borings completed on-site, the greatest vertical extent of observed NAPL (up to 30 ft bgs) in soil and the highest PCB soil concentrations (up to 7,000 mg/kg, or 0.7%) were found in MW-3D. NAPL was also observed in MW-6D (20-25 ft bgs) and SB-16 (10-15 ft bgs).

These observations and the presence of accumulated free product in the sump of MW-3 indicate that DNAPL is present at the Site. In addition, observations from previous

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investigations and specific gravity analysis of NAPL extracted from the MW-3 groundwater sample suggest that some LNAPL is also present at the Site.

The top of a silty clay confining layer was observed in MW-4D, MW-6D, MW-9D, and SB-16 at depths of 29.5 to 32.5 ft bgs. This layer may have limited the downward migration of DNAPL at the Site.

4.3. DEHP TRANSPORT IN GROUNDWATER

DEHP was detected in three wells at the Site: MW-3, MW-3D, and MW-6D. Although concentrations in all three wells exceeded the VGES (maximum concentration of 450 μ g/L), the extent of DEHP contamination appears to be limited in area.

5. RECOMMENDATIONS

Groundwater sampling for PCBs should be continued on a regular basis in order to establish whether seasonal or long-term trends in PCB concentrations are present. It is recommended that monitoring wells EPA-2 and EPA-9 be replaced during the next phase of monitoring well installation. It is not recommended that EPA-5 be replaced, as this well is located cross-gradient of the apparent source area near MW-3 and is within a relatively dense area of the monitoring network.

In addition to sampling of the existing monitoring well network, additional characterization is required to determine the nature and extent of PCBs in the subsurface (NAPL and dissolved-phase) and the potential exposure to PCBs by human and ecological receptors. The characterization tasks outlined below have been grouped according to seven potential objectives for future work at the Site.

Potential Objective A: Determine potential for human exposure to PCB-containing groundwater on residential properties

- Develop inventory of neighborhood residences that contain private wells and/or experience basement flooding.
- Collect samples from private wells and basement drains.

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• Collect samples of surface soils or soil in basements that may have come into contact with PCB-containing groundwater.

Collect indoor air samples from residences with elevated concentrations of PCBs in indoor wells or basement soils.

Potential Objective B: Determine downgradient extent of PCB plume in vicinity of Park Street

- Develop inventory of neighborhood residences than contain private wells and/or experience basement flooding.
- Collect samples from private wells and basement drains.
- Install monitoring well transects along Park Street and in wetland area to the west of Park Street. Collect samples to be analyzed for PCBs and other constituents that may facilitate PCB transport.
- If characterization of vertical extent of contamination is desired, additional deep wells should be installed in existing transect on Little League property and in Park Street transect.

Potential Objective C: Confirm discharge of PCB-containing groundwater to surface water bodies

- Continue measuring water levels in existing piezometers over multiple seasons.
- Install additional piezometers (potentially including multilevel piezometers) in Park Street ditch, unnamed tributary to Furnace Brook, and wetland area to the west of Park Street; measure water levels during multiple seasons and collect samples at points of groundwater discharge. Samples would be analyzed for PCBs and other constituents that may facilitate PCB transport.
- Perform mapping of surface water features in the vicinity of the Site.
- Collect surface water samples collocated with piezometers.

Potential Objective D: Evaluate source and extent of PCBs in groundwater near MW-12

• Install transect of monitoring wells along Bowen Road from MW-1 to the east. Collect samples to be analyzed for PCBs and other constituents that may facilitate PCB transport.

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- Complete shallow soil borings and install additional monitoring wells near southern and western edges of Plasan facility, where accessible. Collect samples to be analyzed for PCBs and other constituents that may facilitate PCB transport.
- Potentially install wells downgradient of MW-12 after reviewing chemical and potentiometric data obtained from new monitoring wells.

Potential Objective E: Define source extent and nature

- Review historical file to create an inventory of known potential source areas (e.g., leachfields, vaults, dry wells) and documented removal actions that have occurred at each.
- Install numerous on-Site soil borings to determine distribution of PCB DNAPL in the subsurface and presence of geologic features that may impact DNAPL distribution.

Potential Objective F: Prevent off-site migration of PCB plume

- Define source extent and nature as described above in Potential Objective E.
- Determine whether transport of PCBs in groundwater is facilitated in a manner that would impact treatment of the PCB plume (e.g., by colloidal transport, adsorption to dissolved organic matter, etc.)
- Install additional soil borings and/or well transects to collect parameters required for potential treatment or containment options (e.g. treatment by reactive barrier or hydraulic containment via pump and treat.)
- Evaluate potential for excavation of source area.

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Potential Objective G: Treat discharge of PCB plume to surface water along Park Street

- Install additional piezometers in ditch on east side of Park Street.
- Collect flow measurements over extended period of time from piezometers, discharge pipe at Greene residence, and ditch. Collect samples to be analyzed for PCBs and other constituents that may facilitate PCB transport.
- Determine feasibility of treating plume discharge via active means (e.g., capture and pumping through carbon) or passive means (treatment barrier).

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TABLES

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Table 1 Hydrophobic Dye Testing Results Former Jard Company Site Bennington, Vermont

Invterval			Boring		
(feet bgs)	MW-3D	MW-4D	MW-6D	MW-9D	SB-16
10-15	Red NAPL droplets	No visible red coloration	No visible red coloration	No visible red coloration	Red NAPL droplets, smearing on walls of VOA
15-20	Two tests performed: both have red NAPL droplets	No visible red coloration	No visible red coloration	No visible red coloration	Two tests performed: no visible red coloration
20-25	Two tests performed: red smearing on walls of VOA		Four tests performed. Two showed slight red discoloration on walls of VOA; two showed no visible red coloration.	No visible red coloration	Two tests performed: no visible red coloration
25-30	Red NAPL droplets, streaks on side of VOA	No recovery	No visible red coloration	No visible red coloration	No visible red coloration
30-35	No recovery	No visible red coloration	No visible red coloration	-	-

Table 2 Laboratory Results: Soil Former Jard Company Site Bennington, Vermont

Boring	Regional Screening Levels (RSLs)		MW-3D	MW-3D	MW-3D	MW-4D	MW-6D
Depth	Residential	Industrial	10 - 15'	20 - 25'	25' - 25.5'	30 - 35'	20 - 25'
Aroclor 1016	3.9	21.0	6,300	3,000	7,000	ND < 0.08	210
Aroclor 1221	0.14	0.54	ND < 800	ND < 800	ND < 2000	ND < 0.08	ND < 30
Aroclor 1232	0.14	0.54	ND < 800	ND < 800	ND < 2000	ND < 0.08	ND < 30
Aroclor 1242	0.22	0.74	ND < 800	ND < 800	ND < 2000	ND < 0.08	ND < 30
Aroclor 1248	0.22	0.74	ND < 800	ND < 800	ND < 2000	ND < 0.08	ND < 30
Aroclor 1254	0.22	0.74	ND < 800	ND < 800	ND < 2000	ND < 0.08	ND < 30
Aroclor 1260	0.22	0.74	ND < 800	ND < 800	ND < 2000	ND < 0.08	ND < 30
DEHP	35.0	120	43,000	3,100	3,200	NA	NA

Boring	Regional Screening Levels (RSLs)		MW-6D	MW-9D	MW-10A	SB-16	SB-16
Depth	Residential	Industrial	30 - 35'	25' - 30'	1.6 - 2.6'	10 - 15'	25 - 30'
Aroclor 1016	3.9	21.0	0.19	ND < 0.08	ND < 0.08	50	ND < 0.08
Aroclor 1221	0.14	0.54	ND < 0.08	ND < 0.08	ND < 0.08	ND < 20	ND < 0.08
Aroclor 1232	0.14	0.54	ND < 0.08	ND < 0.08	ND < 0.08	ND < 20	ND < 0.08
Aroclor 1242	0.22	0.74	ND < 0.08	ND < 0.08	ND < 0.08	ND < 20	ND < 0.08
Aroclor 1248	0.22	0.74	ND < 0.08	ND < 0.08	ND < 0.08	ND < 20	ND < 0.08
Aroclor 1254	0.22	0.74	ND < 0.08	ND < 0.08	ND < 0.08	ND < 20	ND < 0.08
Aroclor 1260	0.22	0.74	ND < 0.08	ND < 0.08	ND < 0.08	ND < 20	ND < 0.08
DEHP	35.0	120	NA	ND < 0.3	ND < 0.3	2,400	ND < 7.5

- 1) All concentrations reported in parts per million (mg/kg).
- 2) ND = analyte not detected; reporting limit provided.
- 3) NA = sample not analyzed for indicated compound.
- 4) DEHP = bis(2-ethylhexyl)phthalate
- 5) PCB analysis performed by EPA Method 8082 with Soxhlet extraction; DEHP analysis performed by EPA Method 8270D.
- 6) Bold = concentration exceeds Residential and Industrial Regional Screening Levels (RSLs).

Table 3 Potentiometric Data Former Jard Company Site Bennington, Vermont

T	Top of Casing	7/29	9/2010	8/	6/2010	8/3	0/2010
Location	Elevation (ft.) (1)	DTW (ft.)	Elevation (ft.)	DTW (ft.)	Elevation (ft.)	DTW (ft.)	Elevation (ft.)
EPA-2	684.40	Dry	< 679.70	Dry	< 679.70	Dry	< 679.70
EPA-3	687.11	9.56	677.55	9.11	678.00	10.06	677.05
EPA-4	685.88	8.80	677.08	8.44	677.44	9.24	676.64
EPA-5	686.01	inace	cessible	inac	cessible	des	troyed
EPA-6	683.72	21.74	not available (3)	21.31	not available (3)	9.36	674.36
EPA-7	683.15	inace	cessible	inac	cessible	10.87	672.28
EPA-8	678.50	inace	cessible	inac	cessible	8.05	670.45
EPA-9	683.91	Dry	< 672.39	10.97	672.94	Dry	< 672.39
EPA-10	684.23	10.34	673.89	10.00	674.23	10.76	673.47
MW-1	680.05	9.26	670.79	9.05	671.00	9.80	670.25
MW-2	684.68	7.44	677.24	6.91	677.77	8.06	676.62
MW-3	685.75	8.78	676.97	not me	easured (2)	9.37	676.38
MW-3D	686.29	not con	nstructed	9.69	676.60	10.57	675.72
MW-4	683.94	7.50	676.44	7.05	676.89	8.20	675.74
MW-4D	683.91	not con	nstructed	8.46	675.45	9.51	674.40
MW-6	682.64	11.17	671.47	11.07	671.57	11.87	670.77
MW-6D	682.82	not con	nstructed	11.52	671.30	12.29	670.53
MW-7	670.53	not con	nstructed	3.91	666.62	4.77	665.76
MW-8	670.60	not con	nstructed	5.26	665.34	5.86	664.74
MW-9	669.43	not con	nstructed	not constructed		4.69	664.74
MW-9D	669.34	not con	nstructed	not constructed		5.12	664.22
MW-10	666.91	not con	nstructed	2.15	664.76	2.66	664.25
MW-11	667.23	not con	nstructed	1.51	665.72	1.96	665.27
MW-12	670.05	not con	nstructed	4.08	665.97	4.35	665.70
MW-13	664.03	not con	nstructed	5.61	658.42	5.70	658.33
PZ-01	687.75	2.68	685.07	1.92	685.83	4.32	683.43
PZ-02	not measured (4)	not con	nstructed	2.14	not available (4)	des	troyed
PZ-03	678.20	2.83	675.37	2.59	675.61	3.58	674.62
PZ-04	664.06	2.97	661.09	2.44	661.62	3.40	660.66
PZ-05	661.25	2.43	658.82	2.03	659.22	2.73	658.52
PZ-06	654.28	3.28	651.00	2.85	651.43	3.69	650.59
PZ-12	666.95	not con	nstructed	2.52	664.43	2.87	664.08
PZ-13	657.20	not con	nstructed	0.98	656.22	1.01	656.19
PZ-14	660.69	not co	nstructed	not co	onstructed	2.13	658.56

¹⁾ Surveyed by Guntlow & Associates, Inc. licensed surveyor

²⁾ Not measured due to suspected potential for presence of non-aqueous phase liquid (NAPL).

³⁾ Elevation not available due to change in top-of casing elevation between time of measurement and time of survey.

⁴⁾ Elevation not available; location destroyed prior to survey.

Table 4 Piezometer Water Level Measurements Former Jard Company Site Bennington, Vermont

	Event 1: 7/27/2010										
Location	Depth to Water in Piezometer (feet)	Depth to Water in Stream (feet)	Inferred Vertical Groundwater Flow Direction								
PZ-01	2.74	2.59	+								
PZ-02		not yet constru	cted								
PZ-03	2.77	2.43	•								
PZ-04	2.90	3.00	^								
PZ-05	2.36	2.33	¥								
PZ-06	3.21	2.83	•								
PZ-12		not yet constru	cted								
PZ-13	not yet constructed										
PZ-14	not yet constructed										

	Event 3: 7/29/2010										
Location	Depth to Water in Piezometer (feet)	Depth to Water in Stream (feet)	Inferred Vertical Groundwater Flow Direction								
PZ-01	2.68	2.68	-								
PZ-02		not yet constru	cted								
PZ-03	2.83	2.56	V								
PZ-04	2.97	3.05	^								
PZ-05	2.43	2.39	¥								
PZ-06	3.28	2.91	•								
PZ-12		not yet constru	cted								
PZ-13		not yet constructed									
PZ-14	not yet constructed										

Event 5: 8/30/2010										
	Depth to Water	Depth to Water	Inferred Vertical							
Location	in Piezometer	in Stream	Groundwater							
	(feet)	(feet)	Flow Direction							
PZ-01	4.32	4.02	Ψ							
PZ-02		destroyed								
PZ-03	3.58	2.82	¥							
PZ-04	3.40	dry (> 3.47)	^							
PZ-05	2.73	dry (> 2.82)	^							
PZ-06	3.69	dry (> 3.15)	unknown							
PZ-12	2.87	2.70	•							
PZ-13	1.01	1.64	^							
PZ-14	2.13	2.57	1							

	Event 2: 7/28/2010										
Location	Depth to Water in Piezometer (feet)	Depth to Water in Stream (feet)	Inferred Vertical Groundwater Flow Direction								
PZ-01	2.64	2.74	^								
PZ-02		not yet constru	cted								
PZ-03	2.85	2.57	Ψ								
PZ-04	3.02	3.12	^								
PZ-05	2.44	2.44	-								
PZ-06	3.31	2.95	Ψ								
PZ-12		not yet constru	cted								
PZ-13		not yet constructed									
PZ-14	not yet constructed										

	Event 4: 8/6/2010										
Location	Depth to Water in Piezometer (feet)	Depth to Water in Stream (feet)	Inferred Vertical Groundwater Flow Direction								
PZ-01	1.92	2.02	^								
PZ-02	2.14	2.05	¥								
PZ-03	2.59	2.24	¥								
PZ-04	2.44	2.59	Λ								
PZ-05	2.03	2.92	^								
PZ-06	2.85	2.46	¥								
PZ-12	2.52	2.78	^								
PZ-13	0.98	1.83	^								
PZ-14		not yet constru	cted								

Notes:

↑ Indicates discharge of groundwater to surface water.

Indicates recharge of groundwater by surface water.

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Table 5
Laboratory Results: Groundwater
Former Jard Company Site
Bennington, Vermont

Well	VGES	EPA-3	EPA-4	EPA-6	EPA-7	EPA-8	EPA-10
Date	μg/L	8/31/2010	8/31/2010	8/31/2010	8/31/2010	8/31/2010	9/1/2010
Aroclor 1016	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	0.7
Aroclor 1221	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1232	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1242	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1248	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1254	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1260	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
DEHP	6.0	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5	ND < 5
Specific Gravity	-	Not analyzed	Not analyzed	0.9769	Not analyzed	Not analyzed	Not analyzed

Well	VGES	MW-1	MW-2	MW-3	MW-3D	MW-3D Field Duplicate	MW-4
Date	μg/L	9/1/2010	9/1/2010	9/2/2010	9/2/2010	9/2/2010	9/1/2010
Aroclor 1016	0.5	0.7	ND < 0.5	ND < 1,000	ND < 10	ND < 10	ND < 0.5
Aroclor 1221	0.5	ND < 0.5	ND < 0.5	ND < 1,000	ND < 10	ND < 10	ND < 0.5
Aroclor 1232	0.5	ND < 0.5	ND < 0.5	14,000	110	100	ND < 0.5
Aroclor 1242	0.5	ND < 0.5	ND < 0.5	ND < 1,000	ND < 10	ND < 10	ND < 0.5
Aroclor 1248	0.5	ND < 0.5	ND < 0.5	ND < 1,000	ND < 10	ND < 10	ND < 0.5
Aroclor 1254	0.5	ND < 0.5	ND < 0.5	ND < 1,000	ND < 10	ND < 10	ND < 0.5
Aroclor 1260	0.5	ND < 0.5	ND < 0.5	ND < 1,000	ND < 10	ND < 10	ND < 0.5
DEHP	6.0	ND < 5	ND < 5	450	70	71	ND < 5
Specific Gravity	-	Not analyzed	Not analyzed	0.9769	Not analyzed	Not analyzed	Not analyzed

- 1) All concentrations reported in parts per billion (μ g/L).
- 2) ND = analyte not detected; reporting limit provided.
- 3) DEHP = bis(2-ethylhexyl)phthalate
- 4) PCB analysis performed by EPA Method 8082 with Soxhlet extraction.
- 5) DEHP analysis performed by EPA Method 8270D.
- 6) Bold = concentration exceeds Vermont Groundwater Enforcement Standards (VGES)

Table 5
Laboratory Results: Groundwater
Former Jard Company Site
Bennington, Vermont

Well	VGES	MW-4D	MW-6	MW-6 Field Duplicate	MW-6D	MW-7	MW-8
Date	μg/L	9/2/2010	9/1/2010	9/1/2010	9/1/2010	8/31/2010	9/1/2010
Aroclor 1016	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	2.3
Aroclor 1221	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1232	0.5	ND < 0.5	12	11	25	ND < 0.5	ND < 0.5
Aroclor 1242	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1248	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1254	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1260	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
DEHP	6.0	ND < 5	ND < 5	ND < 5	45	ND < 5	ND < 5
Specific Gravity	-	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed	Not analyzed

Well	VGES	MW-9	MW-9D	MW-10	MW-11	MW-12	MW-13
Date	μg/L	9/1/2010	9/1/2010	8/30/2010	8/30/2010	8/30/2010	8/30/2010
Aroclor 1016	0.5	5.9	ND < 1	1.6	ND < 0.5	40	ND < 0.5
Aroclor 1221	0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 5	ND < 0.5
Aroclor 1232	0.5	ND < 0.5	7	ND < 0.5	ND < 0.5	ND < 5	ND < 0.5
Aroclor 1242	0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 5	ND < 0.5
Aroclor 1248	0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 5	ND < 0.5
Aroclor 1254	0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 5	ND < 0.5
Aroclor 1260	0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 5	ND < 0.5
DEHP	6.0	ND < 5					
Specific Gravity	-	Not analyzed					

- 1) All concentrations reported in parts per billion (µg/L).
- 2) ND = analyte not detected; reporting limit provided.
- 3) DEHP = bis(2-ethylhexyl)phthalate
- 4) PCB analysis performed by EPA Method 8082 with Soxhlet extraction.
- 5) DEHP analysis performed by EPA Method 8270D.
- 6) Bold = concentration exceeds Vermont Groundwater Enforcement Standards (VGES)

Table 5
Laboratory Results: Groundwater
Former Jard Company Site
Bennington, Vermont

Well	VGES	PZ-04	PZ-05	PZ-06	PZ-13	PZ-14
Date	μg/L	8/31/2010	8/31/2010	8/31/2010	8/30/2010	8/30/2010
Aroclor 1016	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	0.7
Aroclor 1221	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1232	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1242	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1248	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1254	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
Aroclor 1260	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5
DEHP	6.0	ND < 5				
Specific Gravity	-	Not analyzed				

Well	VGES	Greene Pipe	Greene Well	Greene	Watson
Date	μg/L	8/30/2010	8/30/2010	9/20/2010	9/20/2010
Aroclor 1016	0.5	1.7	1.3	ND < 0.3	1.8
Aroclor 1221	0.5	ND < 0.5	ND < 0.5	ND < 0.3	ND < 0.3
Aroclor 1232	0.5	ND < 0.5	ND < 0.5	ND < 0.3	ND < 0.3
Aroclor 1242	0.5	ND < 0.5	ND < 0.5	ND < 0.3	ND < 0.3
Aroclor 1248	0.5	ND < 0.5	ND < 0.5	ND < 0.3	ND < 0.3
Aroclor 1254	0.5	ND < 0.5	ND < 0.5	ND < 0.3	ND < 0.3
Aroclor 1260	0.5	ND < 0.5	ND < 0.5	ND < 0.3	ND < 0.3
DEHP	6.0	ND < 5	ND < 5	Not analyzed	Not analyzed
Specific Gravity	-	Not analyzed	Not analyzed	Not analzyed	Not analzyed

- 1) All concentrations reported in parts per billion (µg/L).
- 2) ND = analyte not detected; reporting limit provided.
- 3) DEHP = bis(2-ethylhexyl)phthalate
- 4) PCB analysis performed by EPA Method 8082 with Soxhlet extraction.
- 5) DEHP analysis performed by EPA Method 8270D.
- 6) Bold = concentration exceeds Vermont Groundwater Enforcement Standards (VGES)

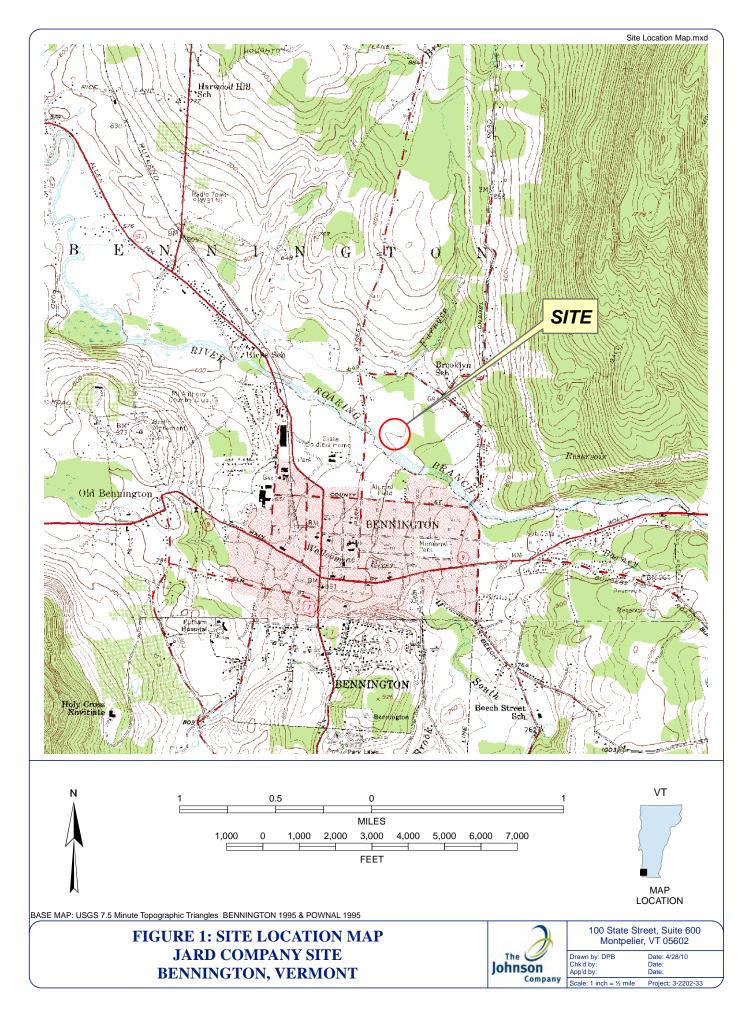
Table 6 Laboratory Results: PCB Congeners in MW-3 Former Jard Company Site Bennington, Vermont

Congener	Initial Analysis		Initial Analysis Diluted Analysis		Result	TEF	TEQ	TEQ
IUPAC#	Concentration (µg/L)	Qualifier	Concentration (µg/L)	Qualifier	(µg/L)	-	(μg/L)	(pg/L)
77	16.7	Е	23.7		23.7	0.0001	2.37E-03	2370
81	0.791		0.978		0.791	0.0003	2.37E-04	237
105	10.8	BE	13.6	В	13.6	0.00003	4.08E-04	408
114	0.893		1.07		0.893	0.00003	2.68E-05	27
118	14.9	BE	19.5	В	19.5	0.00003	5.85E-04	585
123	0.640		0.699		0.640	0.00003	1.92E-05	19
126	0.0918		0.130	J	0.092	0.1	9.18E-03	9180
156 + 157	0.412		0.611		0.412	0.00003	1.24E-05	12
167	0.113		0.165	J	0.113	0.00003	3.39E-06	3
169	ND < 0.00185	U	ND < 0.00282	U	-	0.03	-	-
189	0.0110	J	0.0138	J	0.0110	0.00003	3.30E-07	0.3
				Γotal (μg/L)	59.8	T	otal TEQ (pg/L)	12800
						2,3,7,8-TCD	D VGES (pg/L)	30

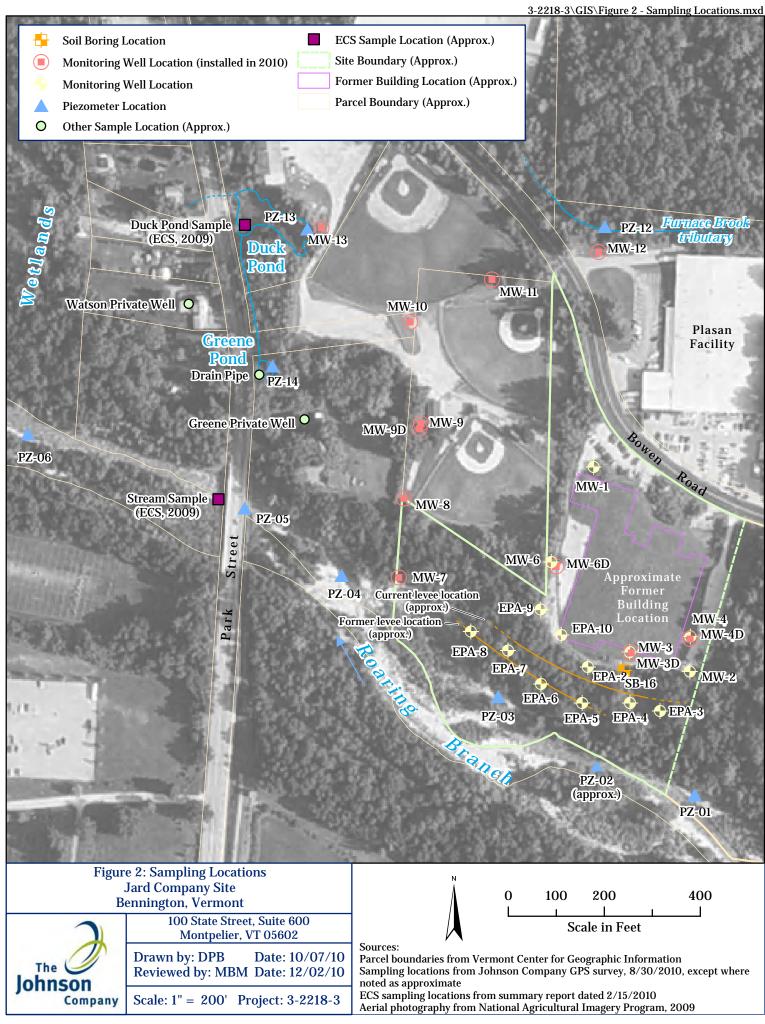
- 1) Reported concentrations are in parts per billion (ug/L).
- 2) ND / U = Analyte not detected; detection limit provided.
- 3) B = Analyte detected in associated method blank.
- 4) E = Concentration exceeds upper calibration limit; estimated concentration provided.
- 5) J = Concentration below lower calibration limit; estimated concentration provided.
- 6) TEF = Toxic Equivalency Factor determined by World Health Organization (2005).
- 7) TEQ = 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) Toxic Equivalent (concentration * TEF)
- 8) VGES = Vermont Groundwater Enforcement Standard
- 9) PCB congeners identified according to International Union of Pure and Applied Chemistry numbering system.
- 10) PCB congeners 156 and 157 co-elute; combined concentration reported.

FIGURES

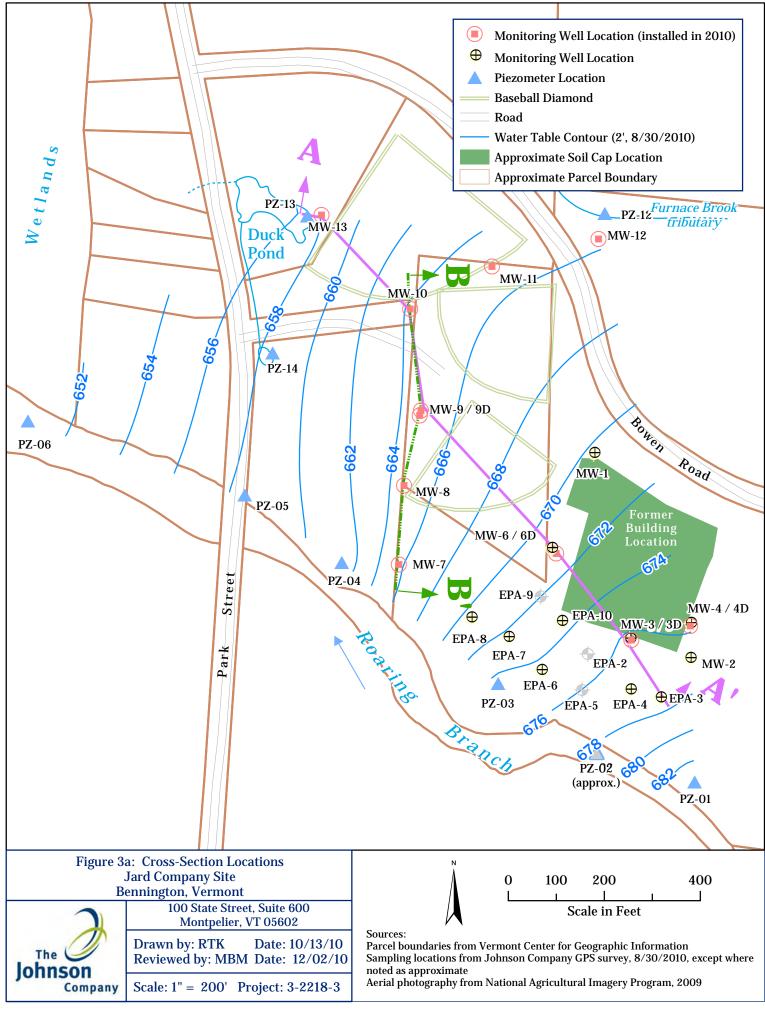
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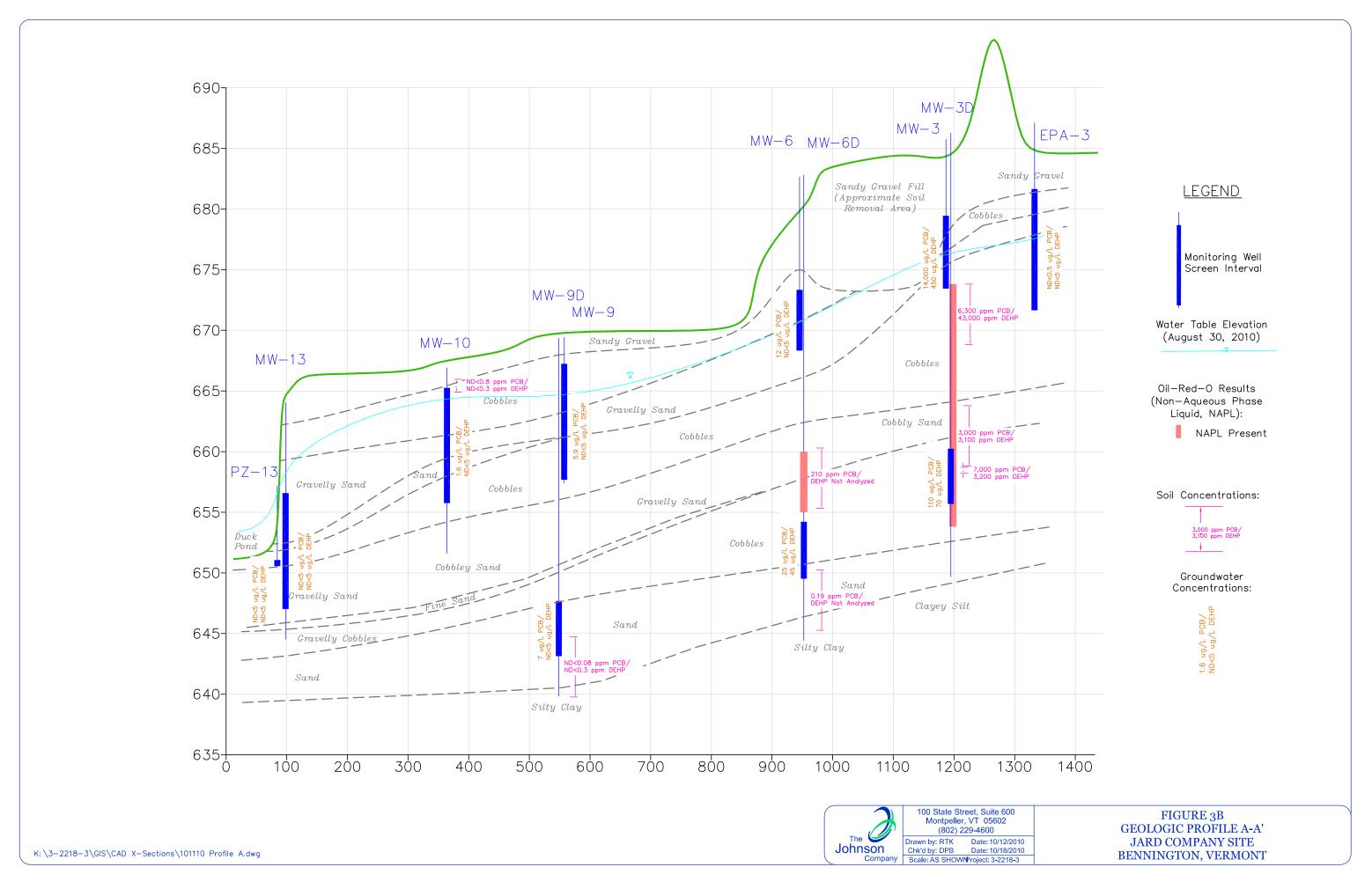
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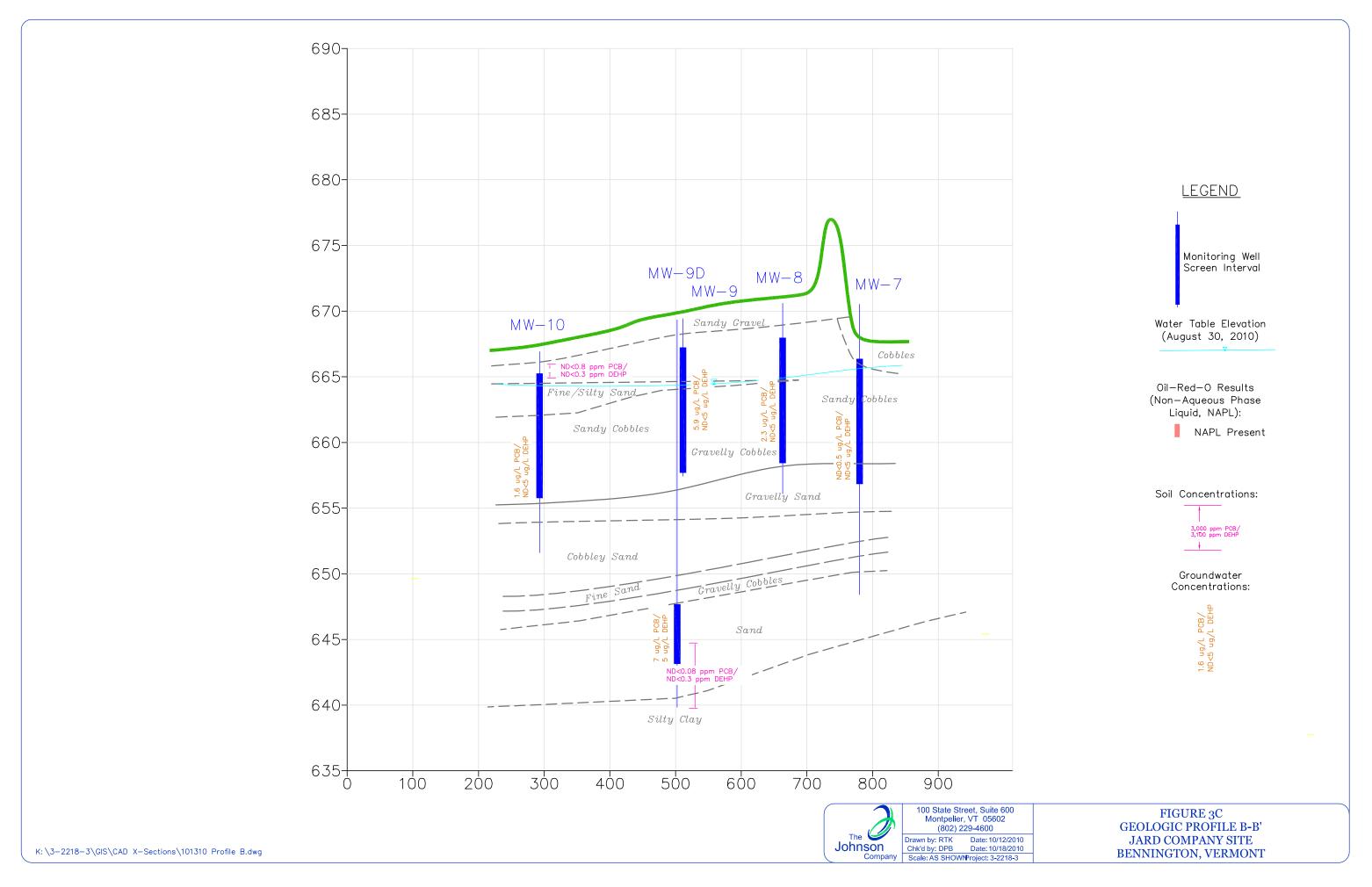


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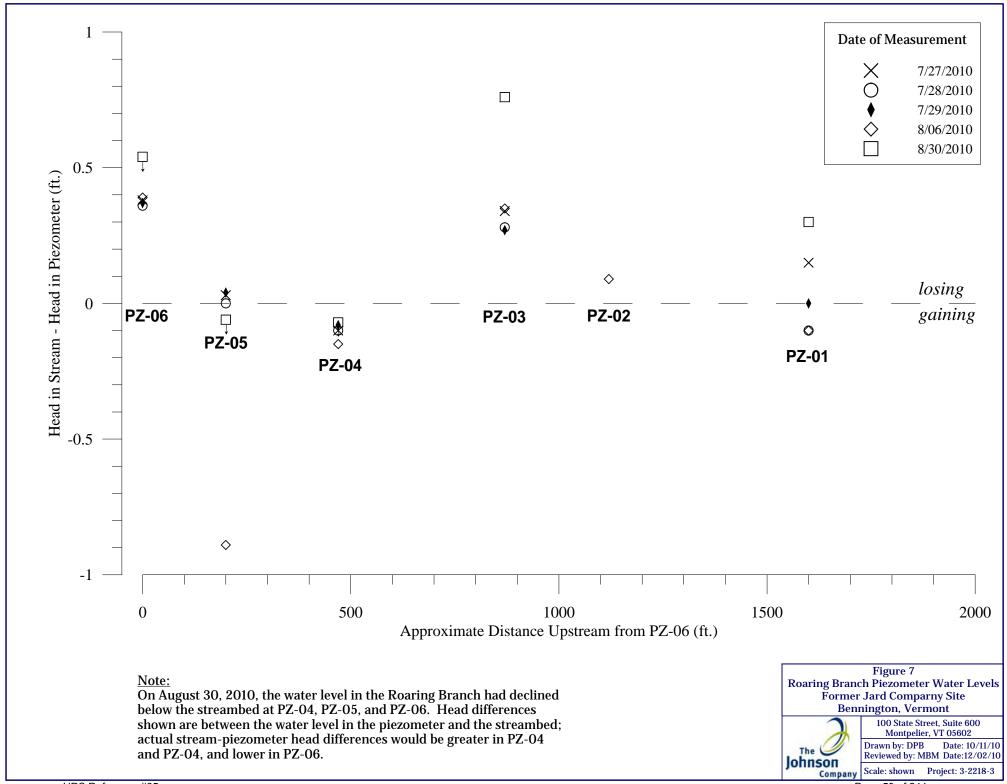
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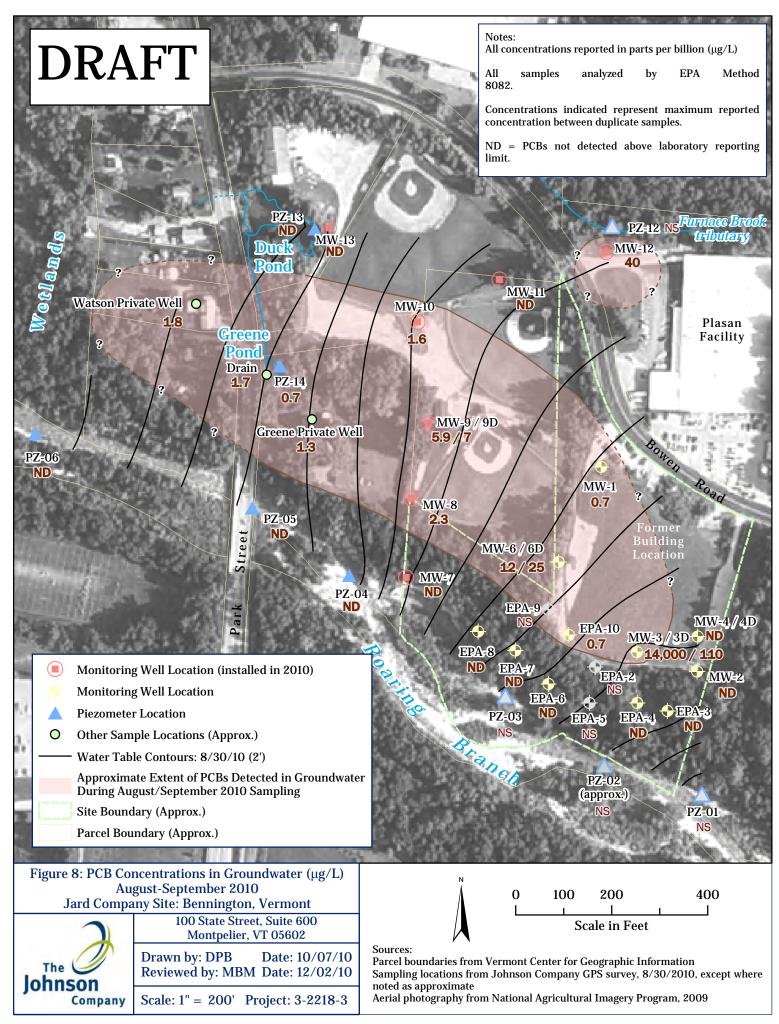


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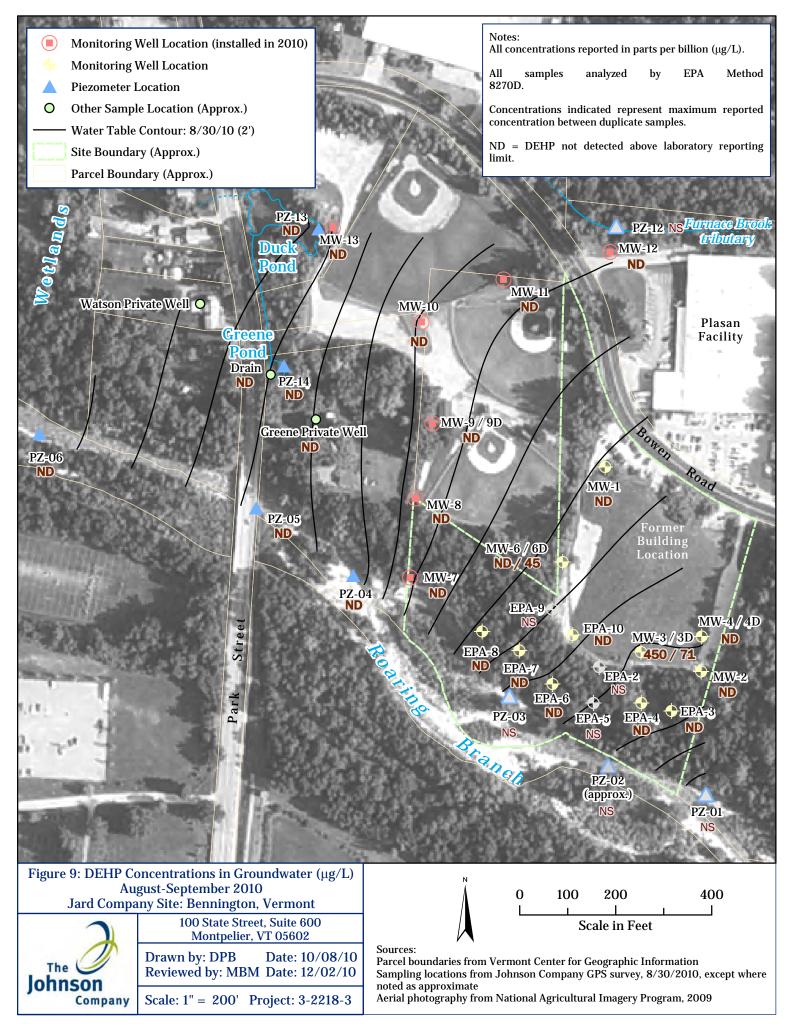


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APPENDIX A PHOTOGRAPHS

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Photo #1. Small pond at edge of 403 Park Street property (Greene Pond).

Note two drainage pipes discharging into pond.



Photo #2. Example hydrophobic dye tests from MW-3D. From left to right: 10-15 ft bgs, 15-20 ft bgs, 20-25 ft bgs, 25-30 ft bgs. Note presence of DNAPL globule in bottom of soil from 15-20 ft bgs.

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Photo #3. Heavily stained soils recovered from 10 to 15 ft bgs in MW-3D.



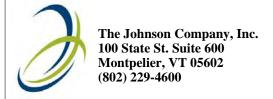
Photo #4. Roaring Branch after a thunderstorm on August 5, 2010.

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APPENDIX B

BOREHOLE LOGS

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Project: JARD Site Location: Bennington, VT Job #: 3-2218-3 Geologist: DPB

TOC Elevation: 666.91

Depth (ft. bgs)	PID (ppm)	Well Construction Diagram	Geology	Description
- 0.00 		Flushmount 2" PVC Casing Cetco Bentonite Chips		- Silty SAND, humid, somewhat cohesive, brown. - Gravelly SAND, sand is fine, gravel fine to medium. Humid. - Gravelly COBBLES, some fine to coarse sand, trace silt. Partly cohesive, wet.
5.00 	1.3	Filpro Silica Filtation Sand Screen		- No Recovery.
- 10.00 	2.9	Bottom Cap Filpro Silica Filtation Sand		COBBLES, rounded to angular, humid. Gravelly SAND, sand is medium to coarse, gravel is medium to coarse, rounded to angular. Wet.
— 15.00				

Drilling Date: 08/05/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS): 443540.062 **Northing (VT SPCS):** 43639.945

Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

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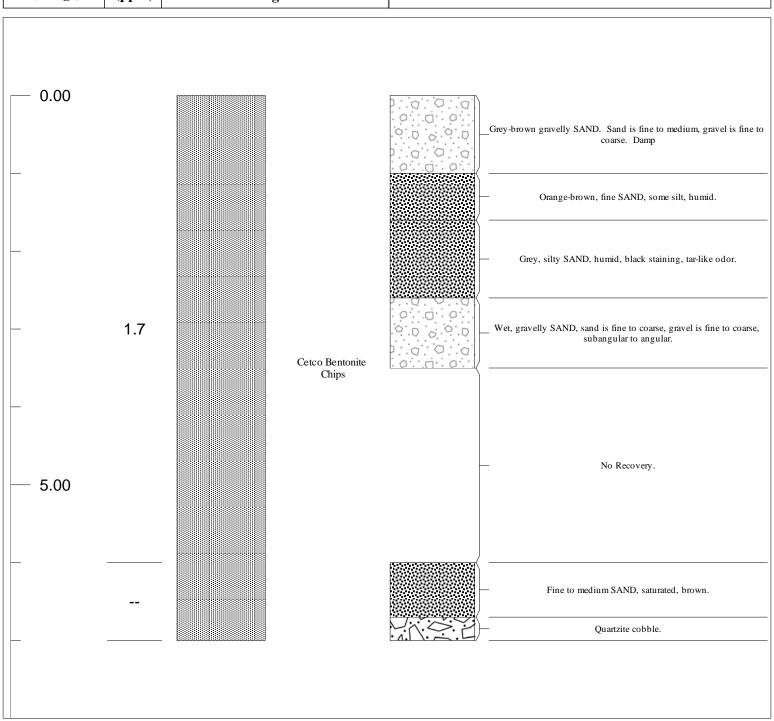


MW-10A

Project: JARD Site Location: Bennington, VT Job #: 3-2218-3

Geologist: DPB TOC Elevation: --

Depth (ft. bgs)	PID (ppm)	Well Construction Diagram	Geology	Description
-----------------	-----------	------------------------------	---------	-------------



Drilling Date: 08/05/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS):--Northing (VT SPCS):--

Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

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MW-10B

Project: JARD Site Location: Bennington, VT Job #: 3-2218-3

Geologist: DPB TOC Elevation: --

Depth (ft. bgs)	PID (ppm)	Well Construction Diagram	Geology	Description
0.00 				Silty SAND, some gravel. Wet, cohesive. Grey-brown from 0-1.6 fbgs, black staining from 1.6-2.2 fbgs. Tar odor from soil around staining. Gravelly COBBLES, damp. Cobbles are rounded to subangular. Some brown, fine to medium SAND, non-cohesive. No Recovery.
5.00 		Cetco Bentonite Chips		Fine to medium SAND, some gravel, single cobble. Wet, non-cohesive. Brown.
10.00			,	No Recovery.

Drilling Date: 08/05/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS):-Northing (VT SPCS):--

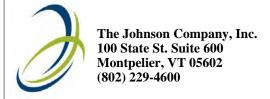
Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

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Project: JARD Site Location: Bennington, VT Job #: 3-2218-3

Geologist: DPB TOC Elevation: 667.23

Depth (ft. bgs)	PID (ppm)	Well Construction Diagram	on Geology	Description
0.00			shmount /C Casing	Gravelly SAND, some silt, humid, dark brown, organic.
_	0.5	— Cetco	Bentonite Chips	COBBLES and silty sand, cobbles generally rounded, up to 0.4' in diameter. Silty sand is cohesive, very dark brown except red-orange from 1.3 to 1.5 fbgs. Damp.
F.00				No Recovery.
5.00		Filpi	creen Silica	COBBLES with gravelly sand. Cobbles are rounded, gravel is angular. Sand is very fine to coarse, well graded. Saturated.
_	0.4	Filtat	ion Sand	No Recovery.
— 10.00 —		Bott	oom Cap	Same as 5-7' bgs, except cobbles are subangular to angular.
	0.5	Filtat	ro Silica tion Sand	No Recovery.

Drilling Date: 08/04/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS): 443592.11 **Northing (VT SPCS):** 43666.868

15.00

Construction Materials

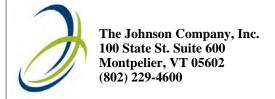
Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

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Caving



Project: JARD Site Location: Bennington, VT Job #: 3-2218-3

Geologist: RVJ TOC Elevation: 670.05

Depth (ft. bgs)	PID (ppm)	Well Construction Diagram	Geology	Description
0.00		Flushmount		
		2" PVC Casing Cetco Bentonite Chips		Organic layer. Brown, dry, silty SAND. Vegetative debris. Brown, humid, fine to medium SAND, some silt. Little gravel is multicolored, subangular to rounded, fine to coarse. Firm. Vegetative debris (roots).
5.00 	0	— Filpro Silica Filtation Sand		Brown, humid, medium to coarse SAND. Trace silt, some gravel. Gravel is same as above. Brown, humid, fine to medium SAND, some silt. Firm. Vegetative debris. Brown, wet, gravelly, coarse SAND. Gravel is fine to coarse, some cobbles (3-4" in diameter), rounded to subrounded and pink or brown. Non-sticky.
40.00	NR	Screen		— No Recovery.
10.00 	0		0 	Multicolored, wet, medium to coarse SAND. Some gravel is fine, multicolored and rounded to subrounded. Non-sticky. Brown, saturated, coarse sandy GRAVEL. Gravel is coarse to fine (one cobble, 5" diameter) rounded to subrounded, brown and pink.
		Bottom Cap		Moist, pink, massive rock fragments (core-wide, COBBLES), some coarse sand, fine gravel is also quartzite. Non-coherent.
15.00	NR	Filpro Silica Filtation Sand)	No Recovery.
13.00		[20000000000000000000000000000000000000		

Drilling Date: 07/30/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS): 443659.741 **Northing (VT SPCS):** 43684.324

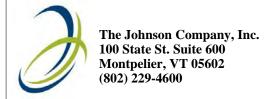
Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

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Project: JARD Site Location: Bennington, VT Job #: 3-2218-3

Geologist: DPB TOC Elevation: 664.03

Depth (ft. bgs)	PID (ppm)	Well Construction Diagram	Geology	Description
0.00		Flushmount Filpro Silica Filtation Sand		Organic layer, SAND, black, damp. Dark brown, gravelly SAND, wet, some silt, cohesive.
	1.3	Cetco Bentonite		_ Sandy COBBLES, sand is dark brown, fine to medium. Cobbles rounded to subangular. Possible fill.
5.00		Chips 2" PVC Casing		
	0.7	_		— Same as above, only humid.
10.00				
	1.1	Filpro Silica Filtation Sand Screen		Sandy GRAVEL, gravel is fine to coarse, sand is fine to coarse. Saturated COBBLES, rock fragments. Some gravel.
15.00				— No Recovery.
	NR	Bottom Cap Filpro Silica Filtation Sand		— No Recovery.
20.00		Native Material Caving		

Drilling Date: 08/03/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS): 443483.805 **Northing (VT SPCS):** 43699.515

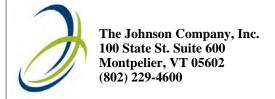
Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

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MW-3D

Project: JARD Site Location: Bennington, VT Job #: 3-2218-3

Geologist: DPB TOC Elevation: 686.29

Depth (ft. bgs)	PID (ppm)	Well Construction Diagram	Geology Description
0.00		Stickup	
0.00	0	××× ×××	Dry, brown, fine SAND, trace gravel, probable fill.
_	0.5		Dry, grey-brown SAND with rock fragments (up to 0.3 ft). COBBLES, rounded to subrounded, dry, slight tar-like odor.
5.00	NR	\[\times \times \times \]	No Recovery.
J	0.8	X X X X X X X X X X X X X X X X X X X	COBBLES, rounded to subangular, dry, light coating of black tar-like substance, tar odor.
_	3.1	× × × × × Solids Grout	Dry, brown, gravelly SAND, thick black tar substance, strong odor. Dry to moist COBBLES with sand, grey tar-like substance.
- - 10.00	NR		No Recovery.
10.00	4.8	2" PVC Casing	COBBLES with sand, coated in tar that is black at top of run, becoming dark grey at bottom.
	NR	××× ×××	No Recovery.
15.00 	5.2	Cetco Bentonite	Gravelly COBBLES, wet, cobbles are rounded to subangular, gravel is fine to coarse, subangular to angular. Upper two feet covered in greyish tar, bottom 1.3 has no discernable tar.
_	NR	Chips	No Recovery.
20.00	0.4		Wet, grey SAND, fine to medium grading downwards to medium to coarse.
_	———		COBBLES, subangular, some gravel.
	NR		— No Recovery.
25.00 	1	Filpro Silica Filtation Sand Screen	Saturated, brown, fine to medium sand, noncohesive. COBBLES with coarse sand and gravel, cobbles and gravel are subangular. Humid.
	NR	Bottom Cap Filpro Silica Filtation Sand Native Material	No Recovery.

Drilling Date: 08/02/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS):443680.58 Northing (VT SPCS): 43429.918

Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

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Caving



MW-4D

Project: JARD Site Location: Bennington, VT Job #: 3-2218-3

Geologist: RVJ TOC Elevation: 683.91

Depth PID Well Construction Geology Description (ft. bgs) **Diagram** (ppm) Stickup 0.00 Humid, brown, medium SAND, some fine sand, little silt. Very friable.
 Humid, brown fine-to-medium SAND, some gravel. Gravel is
 fine-to-coarse, subangular, light brown to pink. Noncohesive. Possible 1 Cetco Bentonite Chips fill. Massive ROCK. Pink, visible white crystals with some structure. Grains visible, sandstone. Possible quartzite.

Wet, pink, fine gravel to coarse SAND-sized particles. Some coarse 8.0 gravel-sized particles. Rock crushed by drilling action, angular pieces 5.00 Massive ROCK fragments. Pink, visble grains and white crystalline fragments. Pulverized nock. Scratches steel, possible quantzite. 1.4 Massive ROCK fragments with some coarse sand, trace coarse gravel.

Angular, same material as rock. Saturated. Massive ROCK fragments (as wide as core barrel, 4"). Some brown, sticky fine sand / silt-sized material. Non-sticky, except for fine 1.5 sand/silt patches.
Brown, saturated FINE SAND / silt-sized material. Some fine ravel-sized material, multicolored (white, pink, brown). Possible slough
Brown, wet, fine-to-carse SAND with some gravel. Gravel is 10.00 2" PVC Casing coarse-to-fine, white and pink with texture, subrounded. Non-cohesive Brown, oversaturated, fine-to-coarse SAND, little gravel. Gravel is fine to coarse, angular to subangular, and pink to white Massive ROCK fragements. White. Visible grains. Volclay High Solids Grout No Recovery. 15.00 0.4 Wet, multicolored, gravelly coarse SAND. Gravel is fine to coarse, multicolored, angular to subrounded. Non-sticky. No Recovery. 20.00 Moist, multicolored, coarse SAND. Well-sorted, noncohesive. Cetco Bentonite Chips 8.0 Moist, multicolored, gravelly coarse SAND. Gravel is fine to cobble-sized (4") and rounded to subangular. Noncohesive. 25.00 Filpro Silica Filtation Sand Screen NR No Recovery. Bottom Cap Filpro Silica 30.00 Filtation Sand Wet, multicolored GRAVEL. Gravel is coarse to fine, angular to subangular. Non-sticky. Cetco Bentonite SAA but with little medium to fine sand-sized material. Brown, Chips non-sticky 0.4 Light grey, fine sandy SILT. Wet, sticky. Native Material Grey, wet clayey SILT, little fine sand. Firm, very plastic. Caving Grey, humid CLAY, little silt, very firm. Forms very durable, very thin 35.00 wire (< 2 mm)

Drilling Date: 07/28/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS): 443718.051 **Northing (VT SPCS):** 43438.909

Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

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MW-6D

Project: JARD Site Location: Bennington, VT Job #: 3-2218-3

Geologist: RVJ TOC Elevation: 682.82

Depth (ft. bgs)	PID (ppm)	Well Construction Diagram	Geology Description
0.00		Stickup	Brown, humid, gravelly SAND, little silt. Sand is coarse to fine, grave is fine to coarse, pink to white, and angular to subrounded. Friable.
5.00	1.3	Cetco Bentonite Chips	Brown, humid, sandy GRAVEL, little silt. Gravel is fine to coarse, few cobbles (3" - 5"). Friable. Dark brown, humid, fine SAND. Some silt, few gravel is SAA, but fine-to-medium. Dry, light brown, coarse sandy GRAVEL. Gravel is SAA, rounded,
	NR	- - - <u> </u>	Massive, core-wide chunks of ROCK. White, some red coloration. Individual grains visible, scratches steel. Probable ROCK. No Recovery. Same as 5 to 6.5' bgs.
10.00		XXX XXX XXX XXX XXX XXX XXX XXX XXX XX	Wet, brown, gravelly fine SAND, little silt. Highly disturbed. Gravel fine-to-coarse, white and angular to subangular. Slightly sticky. Light brown, humid, gravelly fine SAND. Gravel is fine to coarse, on 3" cobble and multicolored (white, pink, brown) firm pellets. SAA but dry. Loose. SAA but moist. Non-coherent. SAA but with massive, core-wide rock instead of gravel. Slightly stick
15.00	NR	Volclay High XXX XX	No Recovery. Saturated, medium to coarse SAND, trace fine sand, multicolored. Non-sticky. Brown, wet, gravelly coarse SAND, trace fine sand. Gravel is white o
20.00	0.8		pink, fine to coarse (few cobbles, 3-4") and subrounded to angular. Non-sticky. Brown, saturated, gravelly fine to medium SAND. Gravel is coarse, rounded and muilticolored, some cobbles (4"). Sticky. Brown, wet, gravelly coarse SAND. Gravel is white or pink, fine to coarse (few cobbles, 3-4") and subrounded to angular. Non-sticky. Saturated, multicolored, gravelly coarse SAND. Gravel is medium to
05.00	NR	Cetco Bentonite Chips	coarse, angular to subrounded and quartizite. Non-sticky. No Recovery.
25.00 - -	0	Filpro Silica Filtation Sand	Brown, wet, gravelly medium to coarse SAND. Little cobbles (2 - 4") gravel is rounded to subrounded, ROCK. Non-sticky. Multicolored, saturated, coarse sandy GRAVEL. Gravel is fine to medium, rounded to subangular and multicolored. Non-sticky. Saturated, massive ROCK fragments, 5-6" long, core-wide. ROCK, pir
30.00	NR	Screen Bottom Cap Filpro Silica Filtation Sand	and white. Some coarse sand-sized material. No Recovery. Moist, multicolored, medium to coarse SAND. Non-coherent. Wet, nulticolored, gravelly, coarse SAND. Gravel is fine to coarse,
35.00	0.3	Cetco Bentonite Chips	mostly fine, subangular and multicolored. Non-sticky. Wet, brown, silty, coarse SAND, little gravel. Gravel is fine, white, subangular to subrounded. Varies from slightly sticky to plastic. Humid, light brown, silty CLAY. Very firm. Forms a thin (<3 mm), slightly durable wire.

Drilling Date: 07/29/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS): 443632.899 **Northing (VT SPCS):** 43484.915

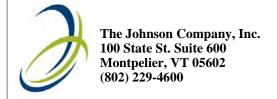
Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

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MW-7

Project: JARD Site Location: Bennington, VT Job #: 3-2218-3

Geologist: DPB TOC Elevation: 670.53

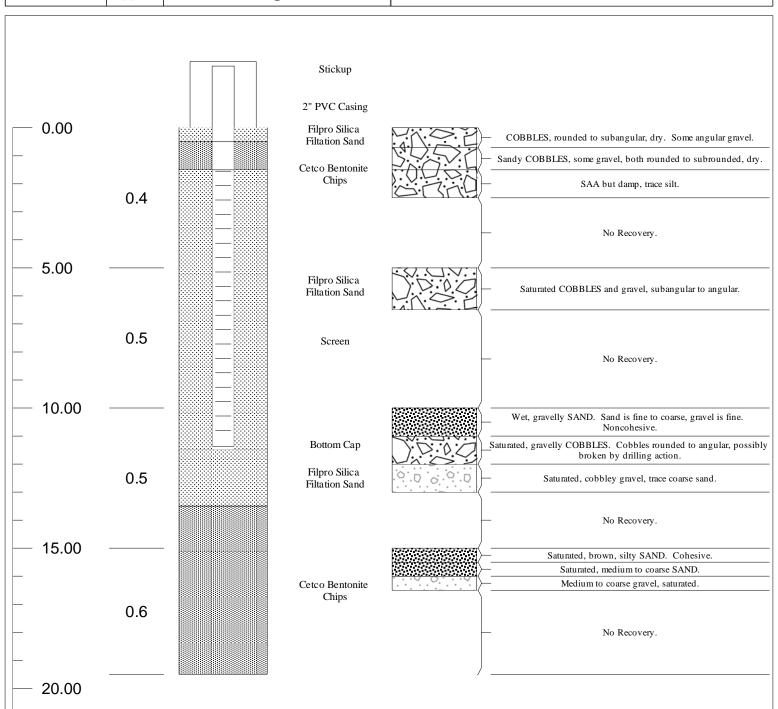
Depth (ft. bgs)

PID (ppm)

Well Construction Diagram

Geology

Description



Drilling Date: 08/03/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS): 443532.846 **Northing (VT SPCS):** 43477.902

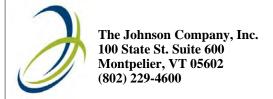
Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

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MW-8

Project: JARD Site Location: Bennington, VT Job #: 3-2218-3 Geologist: DPB

TOC Elevation: 670.6

Depth (ft. bgs)	PID (ppm)	Well Construction Diagram	Geology	Description
0.00 	0.9	Flushmount Cetco Bentonite Chips 2" PVC Casing		Gravelly SAND, dark brown, humid, organic. Sand is very fine to medium, gravel is fine. COBBLES with silty sand, some gravel. Wet from 0.5 to 1.5, humid—from 1.5 to 2.1, dry from 2.1 to 3.0, water probably introduced by drilling action.
	NR			No Recovery.
- 5.00 	0.6	Filpro Silica Filtation Sand Screen		Gravelly COBBLES, cobbles are up to 0.4' in diameter and subangular. Trace silty sand. Wet. Silty sand is dark brown. Brown, wet, silty SAND, some clay. Cohesive, can roll ~3" bead. Gravelly COBBLES, cobbles are up to 0.4' in diameter and subangular. Trace silty sand. Wet. Silty sand is dark brown.
10.00 		Bottom Cap Filpro Silica Filtation Sand Native Material Caving		Same as 7-7.5' bgs.

Drilling Date: 08/04/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS): 443536.282 **Northing (VT SPCS):** 43527.902

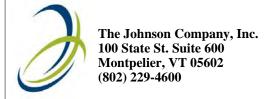
Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

HRS Reference #65 Page 76 of 244



MW-9

Project: JARD Site Location: Bennington, VT Job #: 3-2218-3

Geologist: DPB TOC Elevation: 669.43

Depth (ft. bgs)	PID (ppm)	Well Construction Diagram	Geology	Description
0.00 		Flushmount 2" PVC Casing Cetco Bentonite Chips		Gravelly SAND, humid, some silt. Sand is very fine to coarse, gravel is fine. Organic matter. Same as above, but gravel is fine to coarse. Sandy COBBLES, some gravel. Sand is fine and coarse (no medium sand). Very light brown. Dry except for 4.0 to 4.2, which is damp.
- 5.00 - -	1.8	Screen Filpro Silica Filtation Sand		— No Recovery.
— 10.00 —				Fine to coarse SAND, some silt, trace gravel. Saturated, brown. Gravelly COBBLES, some medium to coarse SAND, saturated. Cobbles are rounded to subangular. Gravelly COBBLES, gravel is medium to coarse. Cobbles rounded to subangular. Saturated.
_ _ _ _ 15.00	0.6	Bottom Cap Filpro Silica Filtation Sand Native Material Caving		No Recovery. NOTE: Well casing heaved after well construction. Total amount of natural material caving is unknown.
			,	

Drilling Date: 08/04/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS): 443546.995 **Northing (VT SPCS):** 43575.526

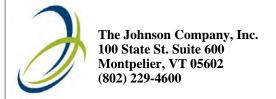
Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

HRS Reference #65 Page 77 of 244



MW-9D

Project: JARD Site Location: Bennington, VT Job #: 3-2218-3

Geologist: DPB TOC Elevation: 669.34

Depth (ft. bgs)	PID (ppm)	Well Construction Diagram	Geology	Description
0.00		Flushmount		Gravelly SAND, some silt, humid, dark brown, organic. Very fine SAND, some silt, humid, red-orange. Same as above, but very light brown. COBBLES with silty sand, damp, silty sand is very dark brown. Tree roots. Gravelly COBBLES, damp, some fine to medium sand, trace silt. Cobbles are rounded to subangular.
5.00 	0.7	Cetco Bentonite Chips		No Recovery.
10.00 	0.5	2" PVC Casing		COBBLES with gravel and sand, wet. Sand is fine to coarse, gravel is fine to coarse. Cobbles and gravel are subangular to angular. Same as above, but lacking fine to medium gravel. No Recovery.
15.00 	0			Gravelly SAND, light brown sand is fine to coarse, gravel is fine. Wet, noncohesive. Sandy GRAVEL, gravel is coarse, sand is fine to coarse. Wet, gravel is rounded to subangular. Cobbley SAND, some gravel. Sand is fine to coarse. Brown cobbles are generally rounded, some angular, subangular. Wet. No Recovery.
- 20.00 	0.1	Filpro Silica Filtation Sand Screen	7.005.H	Fine SAND, some medium sand and silt, saturated, brown. Gravelly COBBLES, some coarse sand, wet. Cobbles are rounded to subangular, gravel subangular to angular. Fine to coarse SAND, some fine gravel, fine to medium sand is brown. Gravel is subangular, wet. ine to medium SAND, few cobbles. Sand is brown. Cobbles rounded. Wet, noncohesive.
25.00 _ _ _ _	0.5	Bottom Cap Filpro Silica Filtation Sand		Brown sand, fine to medium at top, increasing coarse sand with depth, becomes medium to coarse. Wet, noncohesive.
30.00		Cetco Bentonite Chips	0 0 0 0	Gravel, fine to coarse, rounded to angular, wet. Grey-brown silty CLAY, trace fine sand, gravel. Humid, hard. Durability increasing with depth. Cannot roll 1/2" bead at 29.2 fbgs, but can roll <1/8" bead at 30.0 fbgs.

Drilling Date: 08/05/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS): 443546.058 **Northing (VT SPCS):** 43572.481

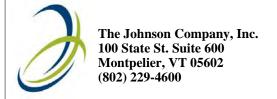
Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

HRS Reference #65 Page 78 of 244



SB-15

Project: JARD Site Location: Bennington, VT Job #: 3-2218-3

Geologist: DPB
TOC Elevation: --

Depth (ft. bgs)	PID (ppm)	Well Const Diagra		Geology	Description
0.00					COBBLES, subangular, dry. Brown, silty SAND, wet, little gravel, cohesive. velly COBBLES, saturated, cobbles subangular, gravel subangular to angular. Some silty sand, brown, cohesive.
			Volclay High		angular. Some silty sand, brown, conesive.
— 5.00 —			Solids Grout		No Recovery.
					Gravelly COBBLES, wet.

Drilling Date: 08/06/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS): 443676.855 **Northing (VT SPCS):** 43421.259

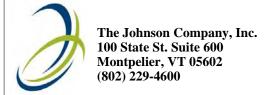
Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

HRS Reference #65 Page 79 of 244



SB-16

Project: JARD Site Location: Bennington, VT Job #: 3-2218-3 Geologist: DPB

TOC Elevation: --

Depth (ft. bgs)	PID (ppm)	Well Construction Diagram	Geology	Description
0.00		******** ******* ******* *******	Sandy GF to coarse.	RAVEL, some cobbles. Sand is fine to medium, gravel is fine Blackish tar-like substance from 1.7-3.5 fbgs. Mild tar-like odor.
5.00 		* * * * * * * * * * * * * * * * * * *	_	No Recovery.
10.00 			· · · · · · · · · · · · · · · · · · ·	AND, wet. Sand is brown-grey, fine to coarse. Gravel is fine and angular. velly COBBLES, some sand, wet. Cobbles are angular.
 15.00 		Volclay High Solids Grout	San	No Recovery. dy COBBLES, wet, some gravel. Sand is fine to coarse.
20.00			Cobbly S	No Recovery. AND, sand is medium to coarse. Some gravel, wet. Cobbles
			Cobbly S	and gravel are rounded to angular. No Recovery.
			0.0 0.0.0	SAND, some cobbles. Sand is medium to coarse, cobbles are rounded to subangular. Wet. ey SILT, humid, poor durability (beads to 3/8" only). Grey. No Recovery.
30.00		*^x^x^x^x^x *xxxxxxxxxxxxxxxxxxxxxxxxxx)	

Drilling Date: 08/06/10
Drilling Company: Boart Longyear
Drilling Method: Rotosonic

Easting (VT SPCS): 443676.149 **Northing (VT SPCS):** 43418.958

Construction Materials

Casing: Schedule 40 PVC Screen: PVC with 0.010 slot Filter Pack: #0 Filter Sand

Seal: Bentonite Surface Completion: --

Riser Pipe and Screen Diameter: 2.0"

HRS Reference #65 Page 80 of 244

APPENDIX C

LABORATORY REPORTS

HRS Reference #65 Page 81 of 244



professional laboratory services

Daniel Baston
The Johnson Company
100 State Street
Montpelier VT 05602

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 91440

Client Identification: JARD | 3-2218-3

Date Received: 8/2/2010

Report revision/reissue: Revision, replaces report dated 8/6/2010

Revision information: ABN report revised



Dear Mr. Baston:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted

< : "less than" followed by the reporting limit

> : "greater than" followed by the reporting limit

%R: % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

D-12

of pages (excluding cover letter)

HRS Reference #65 Page 82 of 244



SAMPLE CONDITIONS PAGE

Eastern Analytical, Inc. ID#:

91440

Client: The Johnson Company

Client Designation: JARD | 3-2218-3

Temperature upon receipt (°C): 3

Received on ice or cold packs (Yes/No): Y

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix		Exceptions/Comments (other than thermal preservation)
91440.01	MW-4D (30-35')	8/2/10	7/28/10	soil	81.9	Adheres to Sample Acceptance Policy
91440.02	MW-6D (20-25')	8/2/10	7/29/10	soil	83.1	Adheres to Sample Acceptance Policy
91440.03	MW-6D (30-35')	8/2/10	7/29/10	soil	79.3	Adheres to Sample Acceptance Policy
91440.04	WT-01	8/2/10	7/29/10	aqueous		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

All results contained in this report relate only to the above listed samples.

References include:

1) EPA 600/4-79-020, 1983

2) Standard Methods for Examination of Water and Wastewater: Inorganics, 19th Edition, 1995; Microbiology, 20th Edition, 1998

3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB

4) Hach Water Analysis Handbook, 2nd edition, 1992

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Eastern Analytical, Inc. ID#:

91440

Client: The Johnson Company

Client Designation: JARD | 3-2218-3

Sample ID:

WT-01

Lab Sample ID: 91440.04 Matrix: aqueous Date Sampled: 7/29/10 Date Received: 8/2/10 Units: ug/l Date of Extraction/Prep: 8/4/10 Date of Analysis: 8/5/10 Analyst: **BML** Method: 8270D **Dilution Factor:**

Bis(2-ethylhexyl)phthalate< 5</th>Nitrobenzene-D5 (surr)83 %R2-Fluorobiphenyl (surr)79 %Rp-Terphenyl-D14 (surr)83 %R





Eastern Analytical, Inc. ID#: 91440

Batch ID: 733988-55383/A080410BaseN1

Client: The Johnson Company

Client Designation:

JARD | 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Diethylphthalate	< 1	19 (74 %R)	18 (72 %R) (3 RPD)	8/5/2010	ug/l	40 - 114	20	8270D
Nitrobenzene-D5 (surr)	78 %R	82 %R	83 %F	8/5/2010	% Rec	35 - 114	20	8270D
2-Fluorobiphenyl (surr)	70 %R	78 %R	78 %F	8/5/2010	% Rec	43 - 116	20	8270D
p-Terphenyl-D14 (surr)	80 %R	87 %R	84 %F	8/5/2010	% Rec	33 - 130	20	8270D

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.

* Flagged analyte recoveries deviated from the QA/QC limits.



Eastern Analytical, Inc. ID#:

91440

Client: The Johnson Company

Client Designation: JARD | 3-2218-3

Sample ID:	MW-4D (30-35')	MW-6D (20-25')	MW-6D (30-35')
Lab Sample ID:	91440.01	91440.02	91440.03
Matrix:	soil	soil	soil
Date Sampled:	7/28/10	7/29/10	7/29/10
Date Received:	8/2/10	8/2/10	8/2/10
% Solid:	81.9	83.1	79.3
Units:	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	8/3/10	8/3/10	8/3/10
Date of Analysis:	8/5/10	8/5/10	8/5/10
Analyst:	JW	JW	JW
Extraction Method:	3540C	3540C	3540C
Analysis Method:	8082	8082	8082
Dilution Factor:	1	466	1
PCB-1016	< 0.08	210	0.19
PCB-1221	< 0.08	< 30	< 0.08
PCB-1232	< 0.08	< 30	< 0.08
PCB-1242	< 0.08	< 30	< 0.08
PCB-1248	< 0.08	< 30	< 0.08
PCB-1254	< 0.08	< 30	< 0.08
PCB-1260	< 0.08	< 30	< 0.08
TMX (surr)	81 %R	DOR	84 %R
DCB (surr)	73 %R	DOR	70 %R

DOR: Diluted out of range.

Acid cleanup was performed on the samples and associated Batch QC.



QC REPORT

Eastern Analytical, Inc. ID#: 91440

Batch ID: 733988-29436/S080210PCB2

Client: The Johnson Company

Client Designation: JARD | 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.07	0.30 (114 %R)	0.30 (112 %R) (2 RPD)	8/3/2010	mg/kg	40 - 140	30	8082
PCB-1221	< 0.07	< 0.07 (%R N/A)	< 0.07 (%R N/A) (RPD	8/3/2010	mg/kg	40 - 140	30	8082
PCB-1232	< 0.07	< 0.07 (%R N/A)	< 0.07 (%R N/A) (RPD	8/3/2010	mg/kg	40 - 140	30	8082
PCB-1242	< 0.07	< 0.07 (%R N/A)	< 0.07 (%R N/A) (RPD	8/3/2010	mg/kg	40 - 140	30	8082
PCB-1248	< 0.07	< 0.07 (%R N/A)	< 0.07 (%R N/A) (RPD	8/3/2010	mg/kg	40 - 140	30	8082
PCB-1254	< 0.07	< 0.07 (%R N/A)	< 0.07 (%R N/A) (RPD	8/3/2010	mg/kg	40 - 140	30	8082
PCB-1260	< 0.07	0.29 (110 %R)	0.29 (109 %R) (1 RPD)	8/3/2010	mg/kg	40 - 140	30	8082
TMX (surr)	104 %R	104 %R	101 %R	8/3/2010	% Rec	30 - 150		8082
DCB (surr)	100 %R	101 %R	97 %R	8/3/2010	% Rec	30 - 150		8082

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

Phone: (603) 228-0525

Page 87 of 244

^{*} Flagged analyte recoveries deviated from the QA/QC limits.



Eastern Analytical, Inc. ID#:

91440

Client: The Johnson Company

Client Designation: JARD | 3-2218-3

Sample ID:

PCB-1242

PCB-1248

PCB-1254

PCB-1260

TMX (surr)

DCB (surr)

WT-01

< 0.5

< 0.5

< 0.5

< 0.5

93 %R

98 %R

Lab Sample ID: 91440.04 Matrix: aqueous 7/29/10 Date Sampled: Date Received: 8/2/10 Units: ug/l Date of Extraction/Prep: 8/3/10 8/3/10 Date of Analysis: JW Analyst: 8082 Method: 1 **Dilution Factor:** PCB-1016 < 0.5 PCB-1221 < 0.5 PCB-1232 < 0.5

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QC REPORT

Eastern Analytical, Inc. ID#: 91440

Batch ID: 733986-32117/A080210E608P1

Client: The Johnson Company

Client Designation: JARD | 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.5	4.5 (112 %R)	4.5 (113 %R) (1 RPD)	8/2/2010	ug/l	40 - 140	20	608
PCB-1221	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	8/2/2010	ug/l	40 - 140	20	608
PCB-1232	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	8/2/2010	ug/l	40 - 140	20	608
PCB-1242	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	8/2/2010	ug/l	40 - 140	20	608
PCB-1248	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	8/2/2010	ug/l	40 - 140	20	608
PCB-1254	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	8/2/2010	ug/l	40 - 140	20	608
PCB-1260	< 0.5	4.3 (107 %R)	4.4 (109 %R) (2 RPD)	8/2/2010	ug/l	40 - 140	20	608
TMX (surr)	91 %R	90 %R	90 %R	8/2/2010	% Rec	30 - 150		608
DCB (surr)	90 %R	103 %R	104 %R	8/2/2010	% Rec	30 - 150		608

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

7

^{*} Flagged analyte recoveries deviated from the QA/QC limits.

· ———		Bol	D FIEL	os R	EQU	IRED	. PL	EASE	Cı	RCLE	KE	QUE	STE	DΑ	NAL	YSI	S .							3144	40	
				OC			SV	OC		TCLF	ME	TALS			NO	RG	ANI	CS			Mic	RO	OTHE	R		
Sample I.D.	Sampling Date / Time *If Composite, Indicate Both Start & Finish Date / Time	MATRIX (SEE BELOW)	524.2 524.2 STA.2 BTEX 524.2 MTBE ONLY 83.60R 534 VITC		띺	(8270C) 625 SVTICS ABN A BN PAH	77	8015B DRO MEDRO MAEPH PEST 608 P.CB 608		META		TOTAL METALS (LIST BELOW)	T SST	BR CI F 504 NO ₂ NO ₃ NO ₂ /NO ₃	CBOD	TKN NH ₃ T. Phos.	T. RES. CHLOR	S	TOTAL CYANIDE TOTAL SULFIDE	KEACTIVE CYANIDE KEACTIVE JULFIDE Flashpoint (Gnitability	T. COLIFORM E. COLI F. COLIFORM	Enterococci Heterotrophic Plate Count		# or Couranteer	E M	N otes e0H Vial #
MW-4D (30-35')	7/28/100848	56	>					λ																1	5	xxhlet
MW-6D (20-25') MW-6D (30-35')	7/29/10 0846	56	1 1					K																	5	oxhlet
MW-60 (30-35)	7/29/10094	5 0						ر																1		Soxple
WT-01		DWG	2			X		X																2	2 8	SEHP CI
						ľ																				
MATRIX: A-AIR; S-SOIL; GW-GROUND WATER WW-WASTE WATER	R; SW-SURFACE WATER; DW-DRINK	ING WATE	R;																							
PRESERVATIVE: H-HCL; N-HNO3; S-H2SO4; 1	Na-NaOH; M-MEOH																									
Project Manager: Dan	Baston			_ _	ATE	NE	DED	:_5	tar	rda	rd	J	247	<u></u>	TE	MP 4	3	°(Me	TALS:	8	RCRA 13	PP	FE, N	Mn PB, (
COMPANY: The John	nson Compan	U		_ _	1100	•				Den	ADTI	uc Oi	DTIA	ue	- ''					^						

Project Manager: Dan Baston
COMPANY: The Johnson Company
ADDRESS: 100 State St. Sinte 600
CITY: Montpelier STATE: VT ZIP: 05602
PHONE: (802) 729-4600 EXT.: 155
FAX: (802) 229-5876
E-MAIL: DB/ASTONO JCONAIL. COIN
SITE NAME: JARD
PROJECT #: 3-276-3
STATE: NH MA ME (VT) OTHER:
REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER OR
GWP, OIL FUND, BROWNFIELD OR OTHER:
QUOTE #: PO #:
Contraction of the second of t

DATE NEEDED:	TOUTA ST	TEMP.	3 01
QA/QC REPORTING LEVEL A B C OR MA MCP PRESUMPTIVE CERTAINTY	REPORTING OP- PRELIMS: YES OR N IF YES: FAX OR PD ELECTRONIC OP- NO FAX E-MAIL	F ICE?	YES NO
SAMPLER(S):	8/2/10 8:3	·O	
RELINQUISHED BY:	DATE: TIME:	RECEIVED BY:	1/
CUSTOdy Sea RELINQUISHED BY:	LOS/Z/16 DATE: TIME:	1445 POR BECEIVED BY:	m
RELINQUISHED BY:	DATE: TIME:	RECEIVED BY:	?
•			1

HER METALS:				_
SSOLVED MET	ALS FIELD FILTERED?	YES	No	
`	CIAL DETECTION LIMITS, I			
PCBS	with Sox	hlet-	exhact	ð)
NOC S	ample for	DEH	P only	

SITE HISTORY: Capacitor Manufacture
SUSPECTED CONTAMINATION: PCBS
FIELD READINGS:

eastern analytical, inc. 25 Chenell Drive | Concord, NH 03301 | Tel: 603.228.0525 | 1.800.287.0525 | Fax: 603.228.4591 | E-Mail: customer_service@eailabs.com | www.eailabs.com

professional laboratory services

(WHITE: ORIGINAL

GREEN: PROJECT MANAGER)



eastern analytical, inc.

propose a company of the second secon

Daniel Baston
The Johnson Company
100 State Street
Montpelier, VT 05602

¥

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 91702

Client Identification: Jard / 3-2218-3

Date Received: 8/9/2010

Dear Mr. Baston:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted

< : "less than" followed by the reporting limit

> : "greater than" followed by the reporting limit

%R: % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

8-20-10

Date

4

of pages (excluding cover letter)



SAMPLE CONDITIONS PAGE

Eastern Analytical, Inc. ID#:

91702

Client: The Johnson Company

Client Designation: Jard / 3-2218-3

Temperature upon receipt (°C): 7.4

Received on ice or cold packs (Yes/No): Y

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix		Exceptions/Comments (other than thermal preservation)
91702.01	SB-16 (10-15')	8/9/10	8/6/10	soil	87.0	Sample temperature exceeded 6° upon receipt
91702.02	SB-16 (25-30')	8/9/10	8/6/10	soil	85.8	Sample temperature exceeded 6° upon receipt
91702.03	MW-3D (20-25')	8/9/10	8/2/10	soil	84.5	Sample temperature exceeded 6° upon receipt
91702.04	MW-3D (10-15')	8/9/10	8/2/10	soil	84.3	Sample temperature exceeded 6° upon receipt
91702.05	MW-9D (25-30')	8/9/10	8/5/10	soil	84.5	Sample temperature exceeded 6° upon receipt
91702.06	MW-3D (25')	8/9/10	8/2/10	soil	78.0	Sample temperature exceeded 6° upon receipt
91702.07	MW-10A (1.6-2.6')	8/9/10	8/5/10	soil	82.0	Sample temperature exceeded 6° upon receipt

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater: Inorganics, 19th Edition, 1995; Microbiology, 20th Edition, 1998
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992

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Eastern Analytical, Inc. ID#:

91702

Client: The Johnson Company

Client Designation: Jard / 3-2218-3

Sample ID:	SB-16 (10-15')	SB-16 (25-30')	MW-3D (20-25')	MW-3D (10-15')	MW-9D (25-30')	MW-3D (25')	MW-10A (1.6-2.6')
Lab Sample ID:	91702.01	91702.02	91702.03	91702.04	91702.05	91702.06	91702.07
Matrix:	soil	soil	soil	soil	soil	soil	soil
Date Sampled:	8/6/10	8/6/10	8/2/10	8/2/10	8/5/10	8/2/10	8/5/10
Date Received:	8/9/10	8/9/10	8/9/10	8/9/10	8/9/10	8/9/10	8/9/10
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep	e: 8/10/10	8/10/10	8/10/10	8/10/10	8/16/10	8/10/10	8/16/10
Date of Analysis:	8/11/10	8/11/10	8/11/10	8/11/10	8/17/10	8/11/10	8/17/10
Analyst:	JMR	JMR	JMR	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D	8270D	8270D	8270D
Dilution Factor:	568	1	577	14578	1	624	1
bis(2-Ethylhexyl)phthalate	2400	< 7.5	3100	43000	< 0.3	3200	< 0.3
Nitrobenzene-D5 (surr)	DOR	53 %R	DOR	DOR	71 %R	DOR	63 %R
2-Fluorobiphenyl (surr)	DOR	55 %R	DOR	DOR	74 %R	DOR	71 %R
p-Terphenyl-D14 (surr)	DOR	59 %R	DOR	DOR	84 %R	DOR	70 %R

DOR: Diluted out of range.

MW-9D (25-30') and MW-10A (1.6-2.6'): Sample results are from re-extraction performed on 8/16/2010.



QC REPORT

Eastern Analytical, Inc. ID#: 91702

Batch ID: 733994-42428/S081010ABN1

Client: The Johnson Company

Client Designation: Jard / 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
bis(2-Ethylhexyl)phthalate	< 7.5	1.1 (68 %R)	1.2 (71 %R) (4 RPD)) 8/10/2010	mg/kg	40 - 140	30	8270D
Nitrobenzene-D5 (surr)	65 %R	67 %R	60 %F	R 8/10/2010	mg/kg	30 - 130		8270D
2-Fluorobiphenyl (surr)	67 %R	68 %R	62 %F	R 8/10/2010	mg/kg	30 - 130		8270D
p-Terphenyl-D14 (surr)	74 %R	7 3 %R	75 %F	8/10/2010	mg/kg	30 - 130		8270D

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

* Flagged analyte recoveries deviated from the QA/QC limits.



QC REPORT

Eastern Analytical, Inc. ID#: 91702

Batch ID: 734000-56231/S081610BaseN1

Client: The Johnson Company

Client Designation: Jard / 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
bis(2-Ethylhexyl)phthalate	< 0.3	1.3 (75 %R)	1.1 (68 %R) (10 RPD)	8/17/2010	mg/kg	40 - 140	30	8270D
Nitrobenzene-D5 (surr)	63 %R	70 %R	64 %F	8/17/2010	mg/kg	30 - 130		8270D
2-Fluorobiphenyl (surr)	76 %R	77 %R	71 %F	8/17/2010	mg/kg	30 - 130		8270D
p-Terphenyl-D14 (surr)	81 %R	96 %R	78 %F	8/17/2010	mg/kg	30 - 130		8270D

Samples were extracted and analyzed within holding time limits. Instrumentation was calibrated in accordance with the method requirements. The method blanks were free of contamination at the reporting limits. Sample surrogate recoveries met the above stated criteria. The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

^{*} Flagged analyte recoveries deviated from the QA/QC limits.



Eastern Analytical, Inc. ID#:

91702

Client: The Johnson Company

Client Designation: Jard / 3-2218-3

Sample ID:	SB-16 (10-15')	SB-16 (25-30')	MW-3D	MW-3D	MW-9D	MW-3D (25')	MW-10A
Campic ib.		(25-30)	(20-25')	(10-15')	(25-30')		(1.6-2.6')
Lab Sample ID:	91702.01	91702.02	91702.03	91702.04	91702.05	91702.06	91702.07
Matrix:	soil	soil	soil	soil	soil	soil	soil
Date Sampled:	8/6/10	8/6/10	8/2/10	8/2/10	8/5/10	8/2/10	8/5/10
Date Received:	8/9/10	8/9/10	8/9/10	8/9/10	8/9/10	8/9/10	8/9/10
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Pre	p: 8/10/10	8/17/10	8/10/10	8/10/10	8/17/10	8/10/10	8/17/10
Date of Analysis:	8/12/10	8/18/10	8/12/10	8/12/10	8/18/10	8/12/10	8/18/10
Analyst:	JW	JW	JW	JW	JW	JW	JW
Method:	8082	8082	8082	8082	8082	8082	8082
Dilution Factor:	226	1	11678	11516	1	25453	1
PCB-1016	50	< 0.08	3000	6300	< 0.08	7000	< 0.08
PCB-1221	< 20	< 0.08	< 800	< 800	< 0.08	< 2000	< 0.08
PCB-1232	< 20	< 0.08	< 800	< 800	< 0.08	< 2000	< 0.08
PCB-1242	< 20	< 0.08	< 800	< 800	< 0.08	< 2000	< 0.08
PCB-1248	< 20	< 0.08	< 800	< 800	< 0.08	< 2000	< 0.08
PCB-1254	< 20	< 0.08	< 800	< 800	< 0.08	< 2000	< 0.08
PCB-1260	< 20	< 0.08	< 800	< 800	< 0.08	< 2000	< 0.08
TMX (surr)	DOR	103 %R	DOR	DOR	103 %R	DOR	88 %R
DCB (surr)	DOR	120 %R	DOR	DOR	109 %R	DOR	64 %R

Acid cleanup was performed on the samples and associated Batch QC.

DOR: Diluted out of range.

SB-16 (25-30'), MW-9D (25-30'), and MW-10A (1.6-2.6'): Sample results are from re-extraction performed on 8/17/10.

Phone: (603) 228-0525

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QC REPORT

Eastern Analytical, Inc. ID#: 91702

Batch ID: 733994-42118/S081010PCB1

Client: The Johnson Company

Client Designation: Jard / 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.07	* 0.47 (176 %R)	* 0.49 (183 %R) (4 RPD)	8/13/2010	mg/kg	40 - 140	30	8082
PCB-1221	< 0.07	< 0.07 (%R	< 0.07 (%R N/A) (RPD	8/13/2010	mg/kg	40 - 140	30	8082
PCB-1232	< 0.07	< 0.07 (%R	< 0.07 (%R N/A) (RPD	8/13/2010	mg/kg	40 - 140	30	8082
PCB-1242	< 0.07	< 0.07 (%R	< 0.07 (%R N/A) (RPD	8/13/2010	mg/kg	40 - 140	30	8082
PCB-1248	< 0.07	< 0.07 (%R	< 0.07 (%R N/A) (RPD	8/13/2010	mg/kg	40 - 140	30	8082
PCB-1254	< 0.07	< 0.07 (%R	< 0.07 (%R N/A) (RPD	8/13/2010	mg/kg	40 - 140	30	8082
PCB-1260	< 0.07	0.26 (97 %R)	0.28 (106 %R) (9 RPD	8/13/2010	mg/kg	40 - 140	30	8082
TMX (surr)	83 %R	92 %R	94 %F	R 8/13/2010	% Rec	30 - 150	1	8082
DCB (surr)	89 %R	105 %R	109 %F	8/13/2010	% Rec	30 - 150		8082

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

The LCS/LCSD demonstrated recoveries above the acceptance range for Aroclor 1016. The high recoveries may be due to high concentrations of Aroclor 1016 detected in the samples in the extraction batch.

^{*} Flagged analyte recoveries deviated from the QA/QC limits.



QC REPORT

Eastern Analytical, Inc. ID#: 91702

Batch ID: 734001-51464/S081710PCB1

Client: The Johnson Company

Client Designation: Jard / 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.07	0.30 (112 %R)	0.30 (113 %R) (1 RPD)	8/18/2010	mg/kg	40 - 140	30	8082
PCB-1221	< 0.07	< 0.07 (%R N/A)	< 0.07 (%R N/A) (RPD	8/18/2010	mg/kg	40 - 140	30	8082
PCB-1232	< 0.07	< 0.07 (%R N/A)	< 0.07 (%R N/A) (RPD	8/18/2010	mg/kg	40 - 140	30	8082
PCB-1242	< 0.07	< 0.07 (%R N/A)	< 0.07 (%R N/A) (RPD	8/18/2010	mg/kg	40 - 140	30	8082
PCB-1248	< 0.07	< 0.07 (%R N/A)	< 0.07 (%R N/A) (RPD	8/18/2010	mg/kg	40 - 140	30	8082
PCB-1254	< 0.07	< 0.07 (%R N/A)	< 0.07 (%R N/A) (RPD	8/18/2010	mg/kg	40 - 140	30	8082
PCB-1260	< 0.07	0.30 (111 %R)	0.29 (108 %R) (3 RPD)	8/18/2010	mg/kg	40 - 140	30	8082
TMX (surr)	94 %R	102 %R	99 %R	8/18/2010	% Rec	30 - 150		8082
DCB (surr)	96 %R	120 %R	102 %R	8 8/18/2010	% Rec	30 - 150		8082

Samples were extracted and analyzed within holding time limits. Instrumentation was calibrated in accordance with the method requirements. The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

^{*} Flagged analyte recoveries deviated from the QA/QC limits.

91702

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

				· VC	C	1.7	S	VC			TCLP	ME	TALS			NO	RG	AN	IICS			Mic	CRO	O.	TH	ER			
Sample I.D.	Sampling Date/Time *If Composite, Indicate Both Start & Finish Date/Time	(V) MATRIX (SEE BELOW)	GRAB/*COMPOSITE	524.2 524.2 BJEX 524.2 MTBE ONLY 8260B 624 VTICs 1, 4 Dioxame EDB DBCP	8021B BTEX HALOS	8015B GRO MEGRO MAVPH	8270C) 625 SYTICS ABN A BN PAH TPH8100 LI L2	32	PEST 608 PCB 608 PEST 8081A PCB 8081)	OIL & GREASE 1664 TPH 1664	TCLP 1311 ABN METALS VOC PEST HERB	DISSOLVED METALS (LIST BELOW)	TOTAL METALS (LIST BELOW)	≅	Br CI F 504 NO ₂ NO ₃ NO ₃ /NO ₃	8	TKN NH ₃ T. Phos.	рН Т. Res. Сиговіне	COD PHENOLS TOC	Total Cyanide Total Sulfide	REACTIVE CYANIDE REACTIVE SULFIDE FLASHPOINT IGNITABILITY	T. COLIFORM E. COLI F. COLIFORM	ENTEROCOCCI Heterotrophic Plate Count				# OF CONTAINERS	N OTES MeOH Vial	
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MW3D (25')	8/2/10 1406	1					8		8																		ĺ		
			6				8		×	_																			
MATRIX: A-AIR; S-SOIL; GW-GROUND WATER WW-WASTE WATER PRESERVATIVE: H-HCL; N-HNO3; S-H2SO4; N		KING V	/ATER;																										
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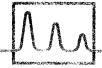
SUSPECTED CONTAMINATION:

FIELD READINGS:

eastern analytical, inc. 25 Chenell Drive | Concord, NH 03301 | Tel: 603.228.0525 | 1.800.287.0525 | FAX: 603.228.4591 | E-Mail: customer_service@eailabs.com | www.eailabs.com

PO #:_

RELINQUISHED BY:



eastern analytical, inc.

professional laboratory services



Daniel Baston
The Johnson Company
100 State Street
Montpelier, VT 05602

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 92320

Client Identification: Jard | 3-2218-3

Date Received: 8/31/2010

Dear Mr. Baston:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted

< : "less than" followed by the reporting limit

> "greater than" followed by the reporting limit

%R: % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

Date

of pages (excluding cover letter)





Eastern Analytical, Inc. ID#:

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

92320

Temperature upon receipt (°C): 5.6

Received on ice or cold packs (Yes/No): Y

Lab ID	Sample ID	Date Received	Date Sampled	Sample % Dry Matrix Weight	Exceptions/Comments (other than thermal preservation)
92320.01	MW-12	8/31/10	8/30/10	aqueous	Adheres to Sample Acceptance Policy
92320.02	MW-13	8/31/10	8/30/10	aqueous	Adheres to Sample Acceptance Policy
92320.03	PZ-13	8/31/10	8/30/10	aqueous	Adheres to Sample Acceptance Policy
92320.04	MVV-10	8/31/10	8/30/10	aqueous	Adheres to Sample Acceptance Policy
92320.05	MW-11	8/31/10	8/30/10	aqueous	Adheres to Sample Acceptance Policy
92320.06	Greene Well	8/31/10	8/30/10	aqueous	Adheres to Sample Acceptance Policy
92320.07	Greene Pipe	8/31/10	8/30/10	aqueous	Adheres to Sample Acceptance Policy
92320.08	PZ-14	8/31/10	8/30/10	aqueous	Adheres to Sample Acceptance Policy
92320.09	MW-7	8/31/10	8/31/10	aqueous	Adheres to Sample Acceptance Policy
92320.1	PZ-4	8/31/10	8/31/10	aqueous	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater: Inorganics, 19th Edition, 1995; Microbiology, 20th Edition, 1998
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992

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Eastern Analytical, Inc. ID#:

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

92320

Sample ID:	MW-12	MW-13	PZ-13	MW-10	MW-11	Greene Well
Lab Sample ID:	92320.01	92320.02	92320.03	92320.04	92320.05	92320.06
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	8/30/10	8/30/10	8/30/10	8/30/10	8/30/10	8/30/10
Date Received:	8/31/10	8/31/10	8/31/10	8/31/10	8/31/10	8/31/10
Units:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Date of Extraction/Prep:	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10
Date of Analysis:	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10
Analyst:	JMR	JMR	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	1	1	1	1
bis(2-Ethylhexyl)phthalate	< 5	< 5	< 5	< 5	< 5	< 5
Nitrobenzene-D5 (surr)	79 %R	82 %R	82 %R	81 %R	85 %R	82 %R
2-Fluorobiphenyl (surr)	84 %R	87 %R	87 %R	88 %R	87 %R	89 %R
p-Terphenyl-D14 (surr)	82 %R	85 %R	86 %R	88 %R	88 %R	87 %R

2



Eastern Analytical, Inc. ID#:

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

92320

Sample ID:	Greene Pipe	PZ-14	MW-7	PZ-4
Lab Sample ID:	92320.07	92320.08	92320.09	92320.1
Matrix:	aqueous	aqueous	aqueous	aqueous
Date Sampled:	8/30/10	8/30/10	8/31/10	8/31/10
Date Received:	8/31/10	8/31/10	8/31/10	8/31/10
Units:	ug/l	ug/l	ug/l	ug/l
Date of Extraction/Prep:	9/1/10	9/1/10	9/1/10	9/1/10
Date of Analysis:	9/1/10	9/1/10	9/1/10	9/1/10
Analyst:	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	1	1
bis(2-Ethylhexyl)phthalate	< 5	< 5	< 5	< 5
Nitrobenzene-D5 (surr)	84 %R	85 %R	82 %R	83 %R
2-Fluorobiphenyl (surr)	88 %R	88 %R	85 %R	85 %R
p-Terphenyl-D14 (surr)	86 %R	89 %R	87 %R	88 %R



QC REPORT

Eastern Analytical, Inc. ID#: 92320

Batch ID: 734016-36282/A090110BaseN1

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
bis(2-Ethylhexyl)phthalate	< 5	20 (78 %R)	21 (84 %R) (7 RPD)	9/1/2010	ug/l	40 - 140	20	8270D
Nitrobenzene-D5 (surr)	84 %R	84 %R	89 %R	9/1/2010	% Rec	35 - 114	20	8270D
2-Fluorobiphenyl (surr)	83 %R	86 %R	90 %R	9/1/2010	% Rec	43 - 116	20	8270D
p-Terphenyl-D14 (surr)	87 %R	90 %R	95 %R	9/1/2010	% Rec	33 - 130	20	8270D

Samples were extracted and analyzed within holding time limits. Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

* Flagged analyte recoveries deviated from the QA/QC limits.



Eastern Analytical, Inc. ID#:

#: 92320

Client: The Johnson Company Client Designation: Jard | 3-2218-3

Lab Sample ID: 92320.01 92320.02 92320.03 92320.03 92320.04 92320.05 92320.06 Matrix: aqueous aqueous							
Matrix: aqueous aqueous <t< th=""><th>Sample ID:</th><th>MW-12</th><th>MW-13</th><th>PZ-13</th><th>MW-10</th><th>MW-11</th><th>Greene Well</th></t<>	Sample ID:	MW-12	MW-13	PZ-13	MW-10	MW-11	Greene Well
Matrix: aqueous aqueous <t< td=""><td>Lab Sampla ID:</td><td>92320 01</td><td>92320 02</td><td>92320.03</td><td>92320 04</td><td>92320.05</td><td>92320 06</td></t<>	Lab Sampla ID:	92320 01	92320 02	92320.03	92320 04	92320.05	92320 06
Date Sampled: 8/30/10 8/31/10 8/31/10 8/31/10 8/31/10 8/31/10 8/31/10 9/31/10 9/31/10 9/31/10 9/31/10 9/31/10 9/31/10 9/31/10 9/31/10 9/31/10 9/31/10 9/31/10 9/31/10 9/31/10 9/31/10 9/21/10 9/21/10 9/21/10 9/21/10 9/21/10 9/21/10 9/21/10 9/21/10							
Date of Extraction/Prep: 9/1/10 9/2/10	Date Sampled: Date Received:	8/30/10	8/30/10	8/30/10	8/30/10	8/30/10	8/30/10
Date of Analysis: 9/2/10 2/2 2/2 2/2 2/2 2/2 883 883 883 883 883	Units:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Analyst: JW JW JW JW JW JW S082 8082 8082 8082 8082 8082 8082 8082	Date of Extraction/Prep:	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10
Method: 8082	Date of Analysis:	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10
Method: 8082	-	JW	JW	JW	JW	JW	JW
PCB-1016 PCB-1221 PCB-1232 PCB-1232 PCB-1242 PCB-1248 PCB-1254 PCB-1260 PCB-1260 PCB-1260 PCB-1260 PCB-1260 PCB-1260 PCB-1278 PCB-1260 PCB	Method:	8082	8082	8082	8082	8082	8082
PCB-1221	Dilution Factor:	10	1	1	1	1	1
PCB-1232	PCB-1016	40	< 0.5	< 0.5	1.6	< 0.5	1.3
PCB-1242 < 5	PCB-1221	•					
PCB-1248 < 5	PCB-1232						
PCB-1254	PCB-1242						
PCB-1260		=					
TMX (surr) 83 %R 86 %R 82 %R 83 %R 79 %R 81 %R							
		-					
	DCB (surr)						

Greene Well: The sample contains more of the heavier Aroclor 1016 congeners than what would normally be expected. The concentration of Aroclor 1016 may be underestimated. Refer to the sample chromatogram overlay for more details.

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Eastern Analytical, Inc. ID#:

92320

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Sample ID:	Greene Pipe	PZ-14	MW-7	PZ-4
Lab Sample ID:	92320.07	92320.08	92320.09	92320.1
Matrix:	aqueous	aqueous	aqueous	aqueous
Date Sampled: Date Received:	8/30/10 8/31/10	8/30/10 8/31/10	8/31/10 8/31/10	8/31/10 8/31/10
Units:	ug/l	ug/l	ug/l	ug/l
Date of Extraction/Prep:	9/1/10	9/1/10	9/1/10	9/1/10
Date of Analysis:	9/2/10	9/2/10	9/2/10	9/2/10
Analyst:	JW	JW	JW	JW
Method:	8082	8082	8082	8082
Dilution Factor:	1	1	1	1
PCB-1016	1.7	0.7	< 0.5	< 0.5
PCB-1221	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1232	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1242	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1248	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1254	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1260	< 0.5	< 0.5	< 0.5	< 0.5
TMX (surr) DCB (surr)	77 %R 81 %R	89 %R 75 %R	87 %R 86 %R	87 %R 87 %R

Samples Greene Pipe and PZ-14: The sample contains more of the heavier Aroclor 1016 congeners than what would normally be expected. The concentration of Aroclor 1016 may be underestimated. Refer to the sample chromatogram overlay for more details.

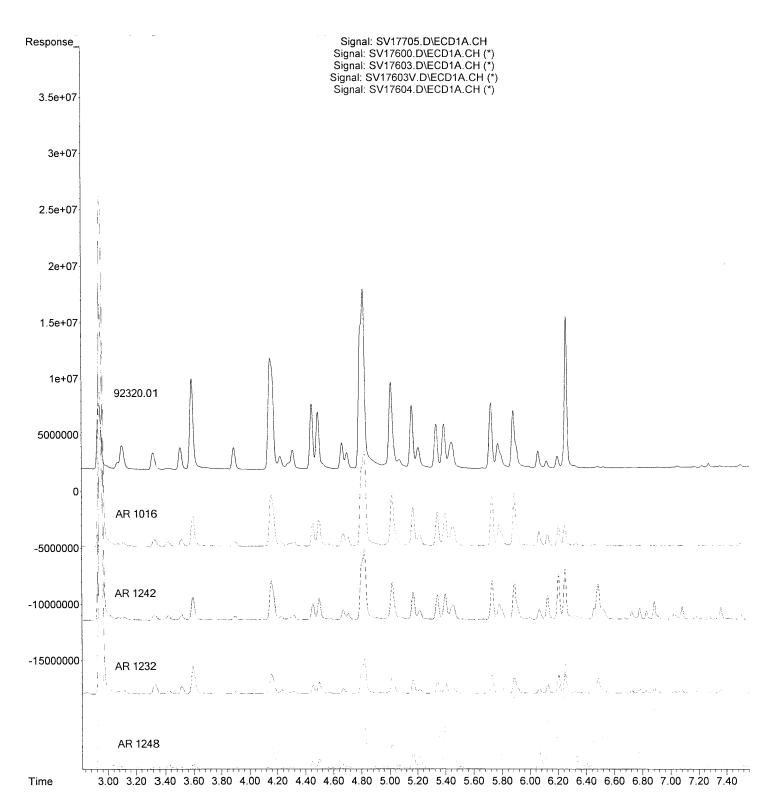
File :C:\msdchem\1\DATA\2010\090110\SV17705.D

Operator: JW

Acquired: 02 Sep 2010 8:57 using AcqMethod PEST.M

Instrument: HP G1530A Sample Name: 92320.01 10X Misc Info: A090110PCB1

Vial Number: 18



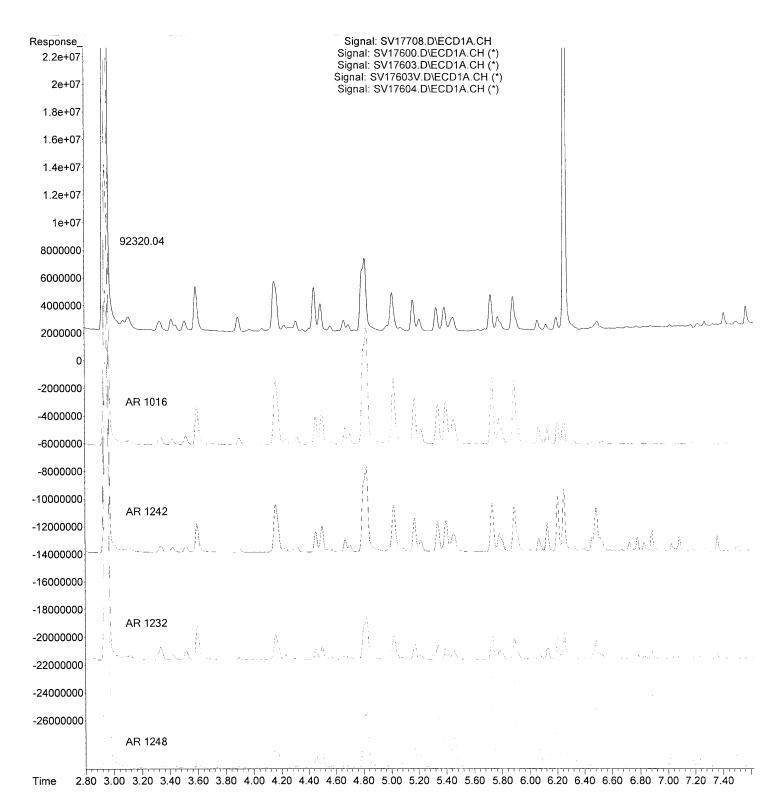
File :C:\msdchem\1\DATA\2010\090110\SV17708.D

Operator: JW

Acquired: 02 Sep 2010 9:42 using AcqMethod PEST.M

Instrument: HP G1530A Sample Name: 92320.04 Misc Info: A090110PCB1

Vial Number: 21

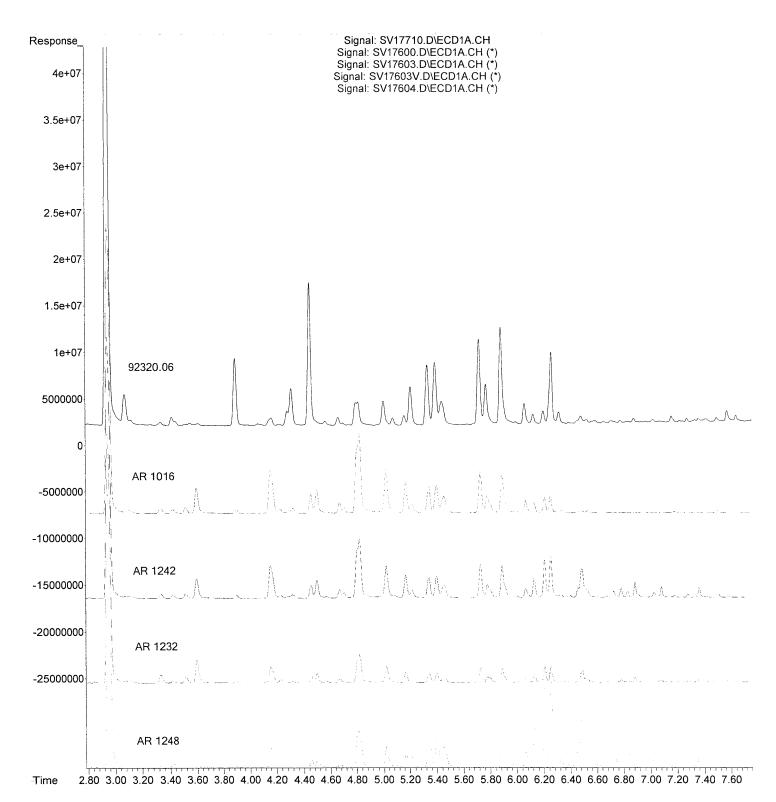


File :C:\msdchem\1\DATA\2010\090110\SV17710.D

Operator: JW

Acquired: 02 Sep 2010 10:12 using AcqMethod PEST.M

Instrument: HP G1530A Sample Name: 92320.06 Misc Info: A090110PCB1

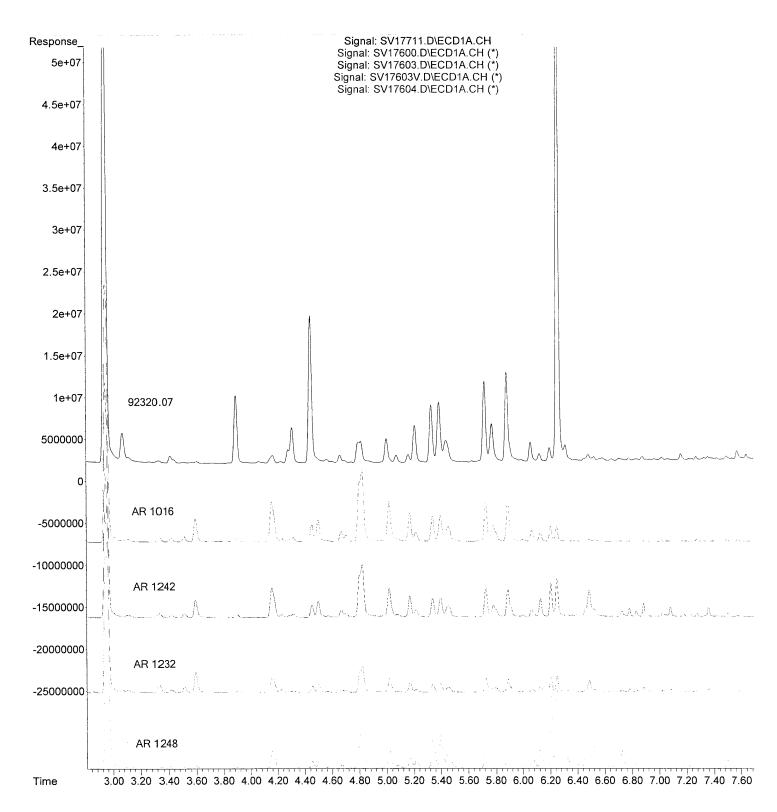


File :C:\msdchem\1\DATA\2010\090110\SV17711.D

Operator: JW

Acquired: 02 Sep 2010 10:27 using AcqMethod PEST.M

Instrument: HP G1530A Sample Name: 92320.07 Misc Info: A090110PCB1

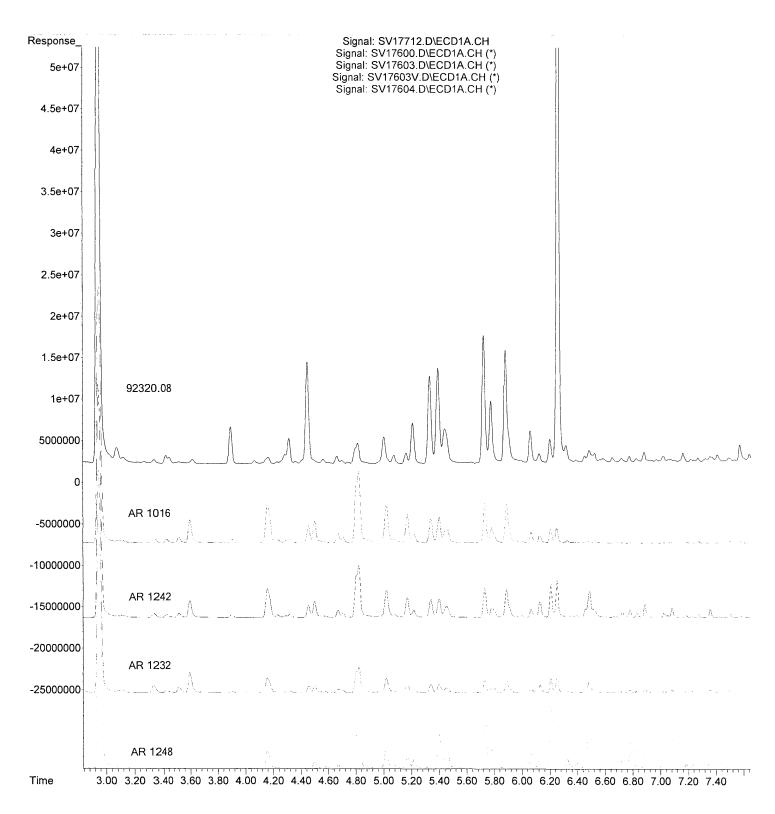


File :C:\msdchem\1\DATA\2010\090110\SV17712.D

Operator: JW

Acquired : 02 Sep 2010 10:42 using AcqMethod PEST.M

Instrument: HP G1530A Sample Name: 92320.08 Misc Info: A090110PCB1





QC REPORT

Eastern Analytical, Inc. ID#: 92320

Batch ID: 734016-35328/A090110PCB1

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.5	3.8 (95 %R)	4.4 (110 %R) (15 RPD)	9/2/2010	ug/l	40 - 140	20	8082
PCB-1221	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/2/2010	ug/l	40 - 140	20	8082
PCB-1232	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/2/2010	ug/l	40 - 140	20	8082
PCB-1242	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/2/2010	ug/l	40 - 140	20	8082
PCB-1248	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/2/2010	ug/l	40 - 140	20	8082
PCB-1254	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/2/2010	ug/l	40 - 140	20	8082
PCB-1260	< 0.5	3.8 (94 %R)	4.1 (103 %R) (9 RPD)	9/2/2010	ug/l	40 - 140	20	8082
TMX (surr)	81 %R	84 %R	90 %F	9/2/2010	% Rec	30 - 150		8082
DCB (surr)	97 %R	85 %R	100 %F	9/2/2010	% Rec	30 - 150		8082

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

* Flagged analyte recoveries deviated from the QA/QC limits.

Phone: (603) 228-0525

CHAIN-OF-CUSTODY RECORD

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

92320

-		-				V	C			S	VO	C		TCLP	Me	TALS			NO	RG	AN	IIC:	S		Mi	CRO	0	TH	ER		
Sample I.D.	* 	SAMP DATE / If COM NDICATI TART & DATE /	Time Posite, Both Finish	MATRIX (SEE BELOW)	GRAB/*COMPOSITE	524.2 524.2 BTEX 524.2 MTBE ONLY 8260B 624 VTICs 1, 4 Dioxane EDB DBCP	802IB BTEX HALOS	80 M	(8270C > 625 SYTICS ABN A BN PAH	П	8015B DRO MEDRO MAEPH	PEST 608 PCB 608 PEST 8081A PCB 8082)	OIL & GREASE 1664 TPH 1664	TCLP 1311 ABN METALS VOC PEST HERB	₩ ₩	TOTAL METALS (LIST BELOW)	2	BR CI F 504 NO ₂ NO ₃ NO ₂ /NO ₃	CB0D	TKN NH3 T. PHOS.	pH T. Res. CHLORINE	COD PHENOLS TOC	TOTAL CYANIDE TOTAL SULFIDE	REACTIVE CYANIDE REACTIVE SULFIDE FLASHPOINT IGNITABILITY	T. COLIFORM E. COLI F. COLIFORM	ENTEROCOCCI HETEROTROPHIC PLATE COUNT	PCBS +668 A	/ /		# OF CONTAINERS	N otes MeOH Vial #
MM-15	8-3	0-10	10732	CW	1				7			*														45	×	├-		2	
MW-13	1	1	13:37	رنای	Ŀ				K			×															8-1	10-10		2	
PZ-13			14:35	ل	G				X			L																		2	
MW-10			16:12	GW	C				X			x																		2	
mw-11.			17:17	ew	G				火			צ																		2	
Greene Well		}	14-52	GW	G				ጷ			χ																		2	
Greenz pipe			15235	GW	6				X			¢																		2	
PZ-14			18:30	GW.	G				X			Χ																		2	
MW-7	8-3	31-10	טווד	GW	ئ				X			X																		2	
PZ-40	į	1 8	8200	(Lu	G				X			X																		2	
MATRIX: A-AIR; S-SOIL GW-GROUND WATER; WW-WASTE WATER PRESERVATIVE: H-HCL; N-HNO3; S-H ₂ SO ₄ ; N				ING W	ATER;																										

PROJECT MANAGER: Daniel Baston
COMPANY: The Johnson Company
ADDRESS, 100 State St. Suite 600
city Montpelier STATE VT 7119: 05/602
PHONE: (802) 229-4600 EXT.
FAX: (802) 229-5876
E-MAIL DPBQ JCOMAIL. COM
SITE NAME: Jaco
PROJECT #: 3-2218-3
STATE: NH MA ME OT OTHER:
REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER OR GWP, OIL FUND, BROWNFIELD OR OTHER:
OUOTE #: PO #:

CCCICI TY	(TEMP. \ 5.60°C	PIEIALS.
REPORTING OPTIONS	ICE! (YES NO	OTHER METALS: _
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8-31-10 m 140 P	20 Solim	1668A
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DATE: TIME:	KECEWED BY:	Suspected Conta
DATE: TIME:	RECEIVED BY:	FIELD READINGS:
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SOLVED METALS FIELD FILTERED?	YES	No	
res: (ie: Special Detection Limits, B	ILLING INF	o, If Differei	(1)
1270C For DE	SHP	only	4.30
15270C For DE 1386 1668A: Chlori 1579 preB by HRS 168A (Sybcontr 1500 year of the 1610 process of the proc	natid GHI	Toplen 2MS M	yl ethod
Inalytical Service	es, Ho	xiston,	rx)
HISTORY: Capacitat	Fact	ory	_
PECTED CONTAMINATION: DCBs	. DE	=HP	

eastern analytical, inc. 25 Chenell Drive | Concord, NH 03301 | Tel: 603.228.0525 | 1.800.287.0525 | Fax: 603.228.4591 | E-Mail: Customer_service@eailabs.com

(WHITE: ORIGINAL

GREEN: PROJECT MANAGER)

professional laboratory services



eastern analytical, inc.

professional laboratory services

Daniel Baston
The Johnson Company
100 State Street
Montpelier, VT 05602

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 92370

Client Identification: Jard | 3-2218-3

Date Received: 9/1/2010



Dear Mr. Baston:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted

< : "less than" followed by the reporting limit

> : "greater than" followed by the reporting limit

%R: % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

D-4-

of pages (excluding cover letter)

Eastern Analytical, Inc. 25 Chenell Drive, Concord, NH 03301

www.eailabs.com

TEL 603-228-0525 | 1-800-287-0525 | FAX 603-228-4591

HRS Reference #65





Eastern Analytical, Inc. ID#:

92370

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Temperature upon receipt (°C): 5.4

Received on ice or cold packs (Yes/No): Y

Lab ID	Sample ID	Date Received	Date Sampled	Sample % Dry Matrix Weight	Exceptions/Comments (other than thermal preservation)
92370.01	EPA-8	9/1/10	8/31/10	aqueous	Adheres to Sample Acceptance Policy
92370.02	PZ-05	9/1/10	8/31/10	aqueous	Adheres to Sample Acceptance Policy
92370.03	PZ-06	9/1/10	8/31/10	aqueous	Adheres to Sample Acceptance Policy
92370.04	EPA-7	9/1/10	8/31/10	aqueous	Adheres to Sample Acceptance Policy
92370.05	EPA-6	9/1/10	8/31/10	aqueous	Adheres to Sample Acceptance Policy
92370.06	EPA-4	9/1/10	8/31/10	aqueous	Adheres to Sample Acceptance Policy
92370.07	EPA-3	9/1/10	8/31/10	aqueous	Adheres to Sample Acceptance Policy
92370.08	MVV-9	9/1/10	9/1/10	aqueous	Adheres to Sample Acceptance Policy
92370.09	MW-9D	9/1/10	9/1/10	aqueous	Adheres to Sample Acceptance Policy
92370.1	MW-8	9/1/10	9/1/10	aqueous	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

All results contained in this report relate only to the above listed samples.

References include:

1) EPA 600/4-79-020, 1983

2) Standard Methods for Examination of Water and Wastewater: Inorganics, 19th Edition, 1995; Microbiology, 20th Edition, 1998

3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB 4) Hach Water Analysis Handbook, 2nd edition, 1992

eastern analytical, inc.

www.eailabs.com

Phone: (603) 228-0525



Eastern Analytical, Inc. ID#:

92370

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Sample ID:	EPA-8	PZ-05	PZ-06	EPA-7	EPA-6	EPA-4
Lab Sample ID:	92370.01	92370.02	92370.03	92370.04	92370.05	92370.06
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	8/31/10	8/31/10	8/31/10	8/31/10	8/31/10	8/31/10
Date Received:	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10
Units:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Date of Extraction/Prep:	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10
Date of Analysis:	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10
Analyst:	JMR	JMR	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	1	1	1	1
bis(2-Ethylhexyl)phthalate	< 5	< 5	< 5	< 5	< 5	< 5
Nitrobenzene-D5 (surr)	80 %R	84 %R	82 %R	84 %R	80 %R	82 %R
2-Fluorobiphenyl (surr)	83 %R	88 %R	85 %R	85 %R	83 %R	84 %R
p-Terphenyl-D14 (surr)	85 %R	87 %R	86 %R	88 %R	84 %R	85 %R



Eastern Analytical, Inc. ID#:

92370

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Sample ID:	EPA-3	MW-9	MW-9D	MW-8
Lab Sample ID:	92370.07	92370.08	92370.09	92370.1
Matrix:	aqueous	aqueous	aqueous	aqueous
Date Sampled:	8/31/10	9/1/10	9/1/10	9/1/10
Date Received:	9/1/10	9/1/10	9/1/10	9/1/10
Units:	ug/l	ug/l	ug/l	ug/l
Date of Extraction/Prep:	9/2/10	9/2/10	9/2/10	9/2/10
Date of Analysis:	9/2/10	9/2/10	9/2/10	9/2/10
Analyst:	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	1	1
bis(2-Ethylhexyl)phthalate	< 5	< 5	< 5	< 5
Nitrobenzene-D5 (surr)	80 %R	78 %R	80 %R	81 %R
2-Fluorobiphenyl (surr)	80 %R	82 %R	81 %R	85 %R
p-Terphenyl-D14 (surr)	83 %R	81 %R	83 %R	85 %R



QC REPORT

Eastern Analytical, Inc. ID#: 92370

Batch ID: 734016-36282/A090110BaseN1

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
bis(2-Ethylhexyl)phthalate	< 5	20 (78 %R)	21 (84 %R) (7 RPD)) 9/1/2010	ug/l	40 - 140	20	8270D
Nitrobenzene-D5 (surr)	84 %R	84 %R	89 %R	R 9/1/2010	% Rec	35 - 114	20	8270D
2-Fluorobiphenyl (surr)	83 %R	86 %R	90 %F	R 9/1/2010	% Rec	43 - 116	20	8270D
p-Terphenyl-D14 (surr)	87 %R	90 %R	95 %F	R 9/1/2010	% Rec	33 - 130	20	8270D

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

* Flagged analyte recoveries deviated from the QA/QC limits.

Page 118 of 244



Eastern Analytical, Inc. ID#:

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

92370

Sample ID:	EPA-8	PZ-05	PZ-06	EPA-7	EPA-6	EPA-4
Lab Sample ID:	92370.01	92370.02	92370.03	92370.04	92370.05	92370.06
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled: Date Received:	8/31/10 9/1/10	8/31/10 9/1/10	8/31/10 9/1/10	8/31/10 9/1/10	8/31/10 9/1/10	8/31/10 9/1/10
Units:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Date of Extraction/Prep:	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10
Date of Analysis:	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10
Analyst:	JW	JW	JW	JW	JW	JW
Method:	8082	8082	8082	8082	8082	8082
Dilution Factor:	1	1	1	1	1	1
PCB-1016	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1221	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1232	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1242	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1248	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1254	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1260	< 0.5	< 0.5 104 %R	< 0.5 103 %R	< 0.5 95 %R	< 0.5 92 %R	< 0.5 97 %R
TMX (surr) DCB (surr)	98 %R 93 %R	104 %R 104 %R	103 %R 106 %R	95 %R 87 %R	92 %R 87 %R	106 %R



Eastern Analytical, Inc. ID#:

92370

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

MW-8
92370.1
aqueous
9/1/10
9/1/10
ug/l
9/2/10
9/2/10
JW
8082
1
2.3
< 0.5
< 0.5
< 0.5
< 0.5
< 0.5
< 0.5
88 %R
71 %R

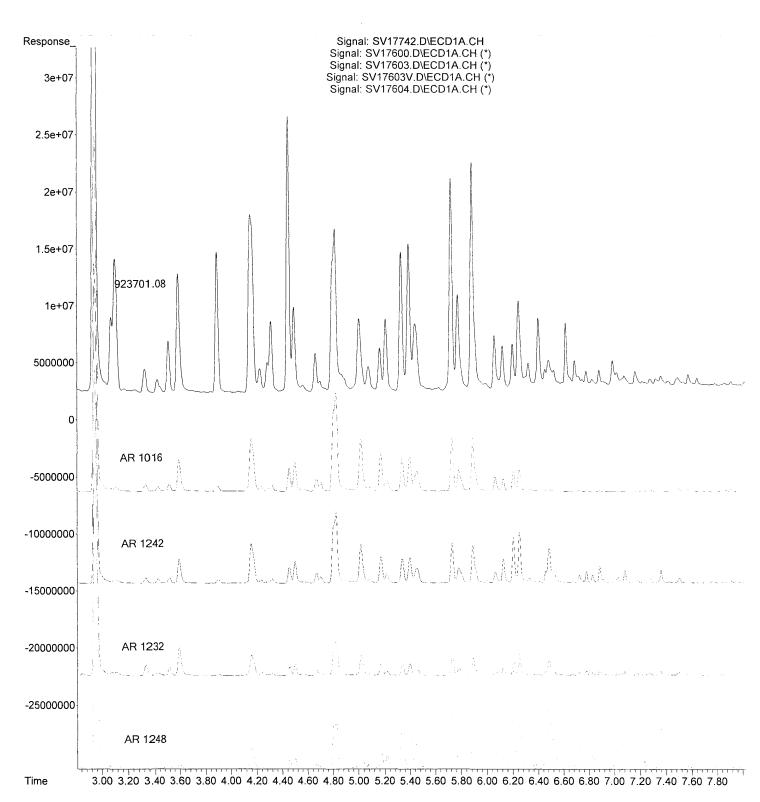
MW-9: The sample contains more of the heavier Aroclor 1016 congeners than what would normally be expected. The concentration of Aroclor 1016 may be underestimated. Refer to the sample chromatogram overlay for more details.

File :C:\msdchem\1\DATA\2010\090210\SV17742.D

Operator: JW

Acquired : 02 Sep 2010 21:06 using AcqMethod PEST.M

Instrument: HP G1530A Sample Name: 92370.08 Misc Info: A090110PCB1

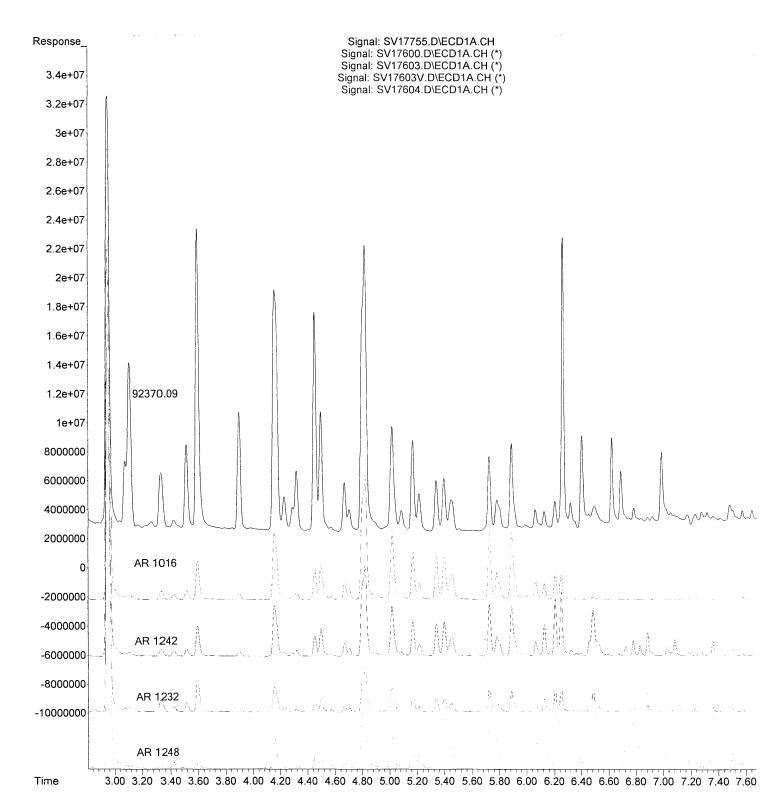


File :C:\msdchem\1\DATA\2010\090210\SV17755.D

Operator: JW

Acquired: 03 Sep 2010 10:48 using AcqMethod PEST.M

Instrument: HP G1530A Sample Name: 92370.09 2X Misc Info: A090110PCB1

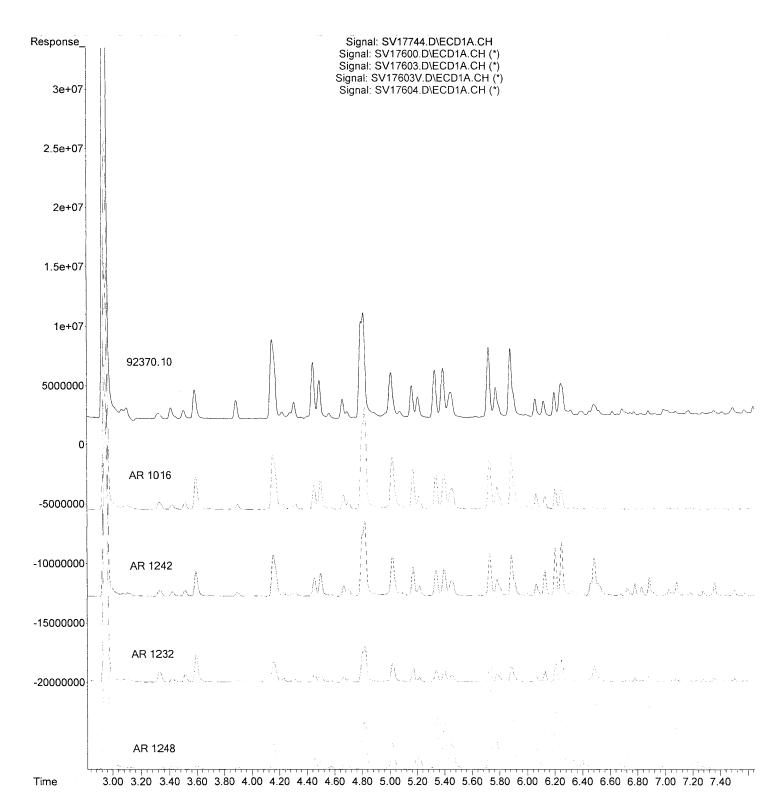


File :C:\msdchem\1\DATA\2010\090210\SV17744.D

Operator: JW

Acquired: 02 Sep 2010 21:36 using AcqMethod PEST.M

Instrument: HP G1530A Sample Name: 92370.10 Misc Info: A090110PCB1



QC REPORT



Eastern Analytical, Inc. ID#: 92370

Batch ID: 734016-35328/A090110PCB1

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.5	3.8 (95 %R)	4.4 (110 %R) (15 RPD)	9/2/2010	ug/l	40 - 140	20	8082
PCB-1221	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/2/2010	ug/l	40 - 140	20	8082
PCB-1232	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/2/2010	ug/l	40 - 140	20	8082
PCB-1242	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/2/2010	ug/l	40 - 140	20	8082
PCB-1248	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/2/2010	ug/l	40 - 140	20	8082
PCB-1254	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/2/2010	ug/l	40 - 140	20	8082
PCB-1260	< 0.5	3.8 (94 %R)	4.1 (103 %R) (9 RPD)	9/2/2010	ug/l	40 - 140	20	8082
TMX (surr)	81 %R	84 %R	90 %F	R 9/2/2010	% Rec	30 - 150		8082
DCB (surr)	97 %R	85 %R	100 %F	9/2/2010	% Rec	30 - 150		8082

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

* Flagged analyte recoveries deviated from the QA/QC limits.

Page 124 of 244

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

			DC	LD							SE C																		_
						VO	C	_		VC	C	T	CLP 1	METAL	.s		N	ORG	AN	IIC	S		M	CRO	O	TH	ER		
Sample I.D.	DATE *IF CON INDICAT START 8	ъ Вотн	MATRIX (SEE BELOW)	GRAB/*COMPOSITE	524.2 STEX 524.2 MTBE ONLY	1, 4 DIOXANE EDB DBCP	HALO	STOCY 625 SYPICE DETAIL	TPH8100 LI L2	8015B DRO MEDRO MAEPH	PEST 608 PCB 608 PEST 8081A PCB 8082	OIL & GREASE 1664 TPH 1664 TCIP 1311 ARN METALS	VOC PEST HERB	DISSOLVED METALS (LIST BELOW) TOTAL METALS (11ST BELOW)	TC TCC TDC Core Com	CI D	BOD CBOD T. ALK.		pH T. RES. CHLORINE	COD PHENOLS TOC	TOTAL CYANIDE TOTAL SULFIDE	REACTIVE CYANIDE REACTIVE SULFIDE FLAKIPOINT IGNITABILITY	T. COLIFORM E. COLI	ENTEROCOCCI HETEROTROPHIC PLATE COUNT	PCBY LEBY A			# OF CONTAINERS	N otes MeOH Vial #
PZ-05	8-31-10	13/45	GW					X	1		X				L										X	0		2	
PZ-05	1	9>50	1 1	- 1				×			X														۲√ن			2	
PZ-06 EPA-7		11:30	. ,					بز			X																	2	
EPA -7		15,05	GW	G				1	(文.																	2,	
EPA-6		16:15	GW	6				K	_		久																	Z	
EPA-4		17>30						7			x																	2	,
EPA-3		18:40	GW	G				.94			X																	Z	
MW-9	9-1-10	7:10	60	G				3			X																	2	
mw-97	J	8:50						X	,		<																	2	
MW-9D MW-8		10:20	Gu					1			X																	2	
MATRIX: A-AIR; S-SOIL GW-GROUND WATER WW-WASTE WATER PRESERVATIVE: H-HCL; N-HNO3; S-H2SO4; N		ATER; DW-DRINI	KING WA	ATER;			3-	co	ر م ل	-																			

PROJECT MANAGER: Daniel Baston	DATE NEED
COMPANY: The Johnson Co ADDRESS: LOO STETE ST. SINTE 600 CITY: Monipelier, VT STATE: Druggord IIP: 05602 PHONE: 802-229-4600 EXT.: FAX: 802-229-5876	QA/QC REPORTING LEV A B OR MA MG
E-MAIL: DPB CJCOMAIL, COM	PRESUMPTIVE C
SITE NAME:	SAMPLER(S):
STATE: NH MA ME VT OTHER:	RELINQUISHED RELINQUISHED
QUOTE #:PO #:	
	RELINQUISHED

GER: Daniel Baston	DATE NEEDED:	indard (A)	TEMP. 5.4 °C	METALS: 8 RCRA 13 PP FE, MN PB, CU
The Johnson Co State St. Swite 600	QA/QC REPORTING LEVEL	REPORTING OPTIONS PRELIMS (YES OR NO	ICE? (YES) NO	OTHER METALS:
pelier, VT STATE: COUPSOID IP: 05602	A B C	IF YES: FAX OR PDF		DISSOLYED METALS FIELD FILTERED? YES NO
-229-4600 EXT:	OR MA MCP	ELECTRONIC OPTIONS	TW EDD	Notes: (IE: Special Detection Limits, Billing Info, If Different)
B CJCOMAIL, Com	PRESUMPTIVE CERTAINTY	No FAX E-MAIL PDF'	Equis	PCB's - 1668 A - Chistoner by her Congrue B by HABC / HRI
JARD 3-2218-3	SAMPLER(S): Warren		223-4502	methed ILLEA (Subcatreet +0 combine that tical Services
MA ME (VT) OTHER:	RELINQUISHED BY	9-1-10 10:37 DITE:// TIME: RET	CHYED BY:	Housta - Texas
STATE OF THE STORMWATER OR GWP, OIL FUND, BROWNFIELD OR OTHER:	Homer Clin 9	P/1/10 1425 Date: Time: Rec	EIVED BY:	SITE HISTORY: Capacitor facility
PO #:				SUSPECTED CONTAMINATION: PCBs/DEHP
eastern analytical, inc. 25 CHENELL DRIVE COM	1		CEIVED BY: (: 603.228.4591 E-MAIL:	CUSTOMER_SERVICE@EAILABS.COM WWW.EAILABS.COM

TILIMES. O Ment. 15 (1	,	
OTHER METALS:		
DISSOLVED METALS FIELD FILTERED?	YES	No
NOTES: (IE: SPECIAL DETECTION LIMITS, B	ILLING INFO	o, If Different)
1-20 - 200 N	· · ·	9-31-10
PoB's - 1668A - chlory Congue B Ja Method 1668A (S Colubio thely H Housta - Texas	- LYDRA	a bythery
crome B &	9, HA	bC/HICM
method 1668A (S	المرود	treat 40
Colubring thaty to	cs(}	euro
Houston - Texas		
SITE HISTORY: Capaciton		
Site mision.	12	
SUSPECTED CONTAMINATION: PCB	5/0	田村九
FIELD READINGS:		

professional laboratory services

(WHITE: ORIGINAL

GREEN: PROJECT MANAGER)



castern amalylical, inc.

Daniel Baston
The Johnson Company
100 State Street
Montpelier, VT 05602

Subject: Laboratory Report

•

Eastern Analytical, Inc. ID: 92417

Client Identification: Jard | 3-2218-3

Date Received: 9/2/2010



Dear Mr. Baston:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted

< : "less than" followed by the reporting limit

> : "greater than" followed by the reporting limit

%R: % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director Date # of pages (excluding cover letter)

Eastern Analytical, Inc. 25 Chenell Drive, Concord, NH 2801 www.eailabs.com HH 602 Ltd 2017 (1981) NH 2016 (1984)

HRS Reference #65 Page 126 of 244





Eastern Analytical, Inc. ID#:

92417

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Temperature upon receipt (°C): 2

Received on ice or cold packs (Yes/No): Y

Lab ID	Sample ID	Date Received	Date Sampled	Sample % Dry Matrix Weight	Exceptions/Comments (other than thermal preservation)
92417.01	MW-1	9/2/10	9/1/10	aqueous	Adheres to Sample Acceptance Policy
92417.02	EPA-10	9/2/10	9/1/10	aqueous	Adheres to Sample Acceptance Policy
92417.03	DP-1	9/2/10	9/1/10	aqueous	Adheres to Sample Acceptance Policy
92417.04	MW-6	9/2/10	9/1/10	aqueous	Adheres to Sample Acceptance Policy
92417.05	MW-6D	9/2/10	9/1/10	aqueous	Adheres to Sample Acceptance Policy
92417.06	MW-2	9/2/10	9/1/10	aqueous	Adheres to Sample Acceptance Policy
92417.07	MW-4	9/2/10	9/1/10	aqueous	Adheres to Sample Acceptance Policy
92417.08	MW-4D	9/2/10	9/2/10	aqueous	Adheres to Sample Acceptance Policy
92417.09	MW-3D	9/2/10	9/2/10	aqueous	Adheres to Sample Acceptance Policy
92417.1	DP-2	9/2/10	9/2/10	aqueous	Adheres to Sample Acceptance Policy
92417.11	MW-3	9/2/10	9/2/10	aqueous	Adheres to Sample Acceptance Policy
92417.12	EB-1	9/2/10	9/2/10	aqueous	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater: Inorganics, 19th Edition, 1995; Microbiology, 20th Edition, 1998
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992

eastern analytical, inc.

www.eailabs.com

Phone: (603) 228-0525



Eastern Analytical, Inc. ID#:

92417

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Sample ID:	MW-1	EPA-10	DP-1	MW-6	MW-6D	MW-2
Lab Sample ID:	92417.01	92417.02	92417.03	92417.04	92417.05	92417.06
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10
Date Received:	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10
Units:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Date of Extraction/Prep:	9/3/10	9/3/10	9/3/10	9/3/10	9/3/10	9/3/10
Date of Analysis:	9/3/10	9/3/10	9/3/10	9/3/10	9/3/10	9/3/10
Analyst:	JMR	JMR	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	1	1	1	1
bis(2-Ethylhexyl)phthalate	< 5	< 5	< 5	< 5	45	< 5
Nitrobenzene-D5 (surr)	79 %R	79 %R	74 %R	79 %R	79 %R	78 %R
2-Fluorobiphenyl (surr)	80 %R	82 %R	74 %R	79 %R	77 %R	81 %R
p-Terphenyl-D14 (surr)	87 %R	85 %R	81 %R	85 %R	85 %R	86 %R



Eastern Analytical, Inc. ID#:

92417

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Sample ID:	MW-4	MW-4D	MW-3D	DP-2	MW-3	EB-1
Lab Sample ID:	92417.07	92417.08	92417.09	92417.1	92417.11	92417.12
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled:	9/1/10	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10
Date Received:	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10	9/2/10
Units:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Date of Extraction/Prep:	9/3/10	9/3/10	9/3/10	9/3/10	9/3/10	9/3/10
Date of Analysis:	9/3/10	9/3/10	9/7/10	9/3/10	9/7/10	9/3/10
Analyst:	JMR	JMR	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	1	1	10	1
bis(2-Ethylhexyl)phthalate	< 5	< 5	70	71	450	< 5
Nitrobenzene-D5 (surr)	76 %R	79 %R	73 %R	80 %R	89 %R	80 %R
2-Fluorobiphenyl (surr)	81 %R	88 %R	78 %R	86 %R	114 %R	87 %R
p-Terphenyl-D14 (surr)	83 %R	85 %R	76 %R	86 %R	116 %R	85 %R



QC REPORT

Eastern Analytical, Inc. ID#: 92417

Batch ID: 734018-43111/A090310BaseN1

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
bis(2-Ethylhexyl)phthalate	< 5	19 (77 %R)	19 (76 %R) (1 RPD)	9/3/2010	ug/l	40 - 140	20	8270D
Nitrobenzene-D5 (surr)	79 %R	80 %R	81 %R	9/3/2010	% Rec	35 - 114	20	8270D
2-Fluorobiphenyl (surr)	72 %R	82 %R	81 %R	9/3/2010	% Rec	43 - 116	20	8270D
p-Terphenyl-D14 (surr)	86 %R	93 %R	94 %R	9/3/2010	% Rec	33 - 130	20	8270D

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

* Flagged analyte recoveries deviated from the QA/QC limits.

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Eastern Analytical, Inc. ID#:

92417

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Sample ID:	MVV-1	EPA-10	DP-1	MW-6	MW-6D	MW-2
i ah Sampla ID:	92417.01	92417.02	92417.03	92417.04	92417.05	92417.06
Lab Sample ID: Matrix:	agueous	aqueous	aqueous	aqueous	aqueous	aqueous
	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10
Date Sampled: Date Received:	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10	9/1/10
Units:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Date of Extraction/Prep:	9/3/10	9/3/10	9/3/10	9/3/10	9/3/10	9/3/10
Date of Analysis:	9/7/10	9/7/10	9/7/10	9/7/10	9/7/10	9/7/10
Analyst:	JW	JW	JW	JW	JW	JW
Method:	8082	8082	8082	8082	8082	8082
Dilution Factor:	1	1	1	1	1	1
PCB-1016	0.7	0.7	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1221	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1232	< 0.5	< 0.5	11	12	25	< 0.5
PCB-1242	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1248	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1254	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
PCB-1260	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TMX (surr)	94 %R	86 %R	83 %R	85 %R	83 %R	90 %R
DCB (surr)	99 %R	88 %R	110 %R	99 %R	85 %R	103 %R

Samples MW-1 and EPA-10: The sample contains more of the heavier Aroclor 1016 congeners than what would normally be expected. The concentration of Aroclor 1016 may be underestimated. Refer to the sample chromatogram overlay for more details.

Samples DP-1 and MW-6: The samples were re-analyzed at a dilution factor of 2 for Aroclor 1232 on 9/8/10.

Sample MW-6D was re-analyzed at a dilution factor of 5 for Aroclor 1232 on 9/8/10.



Eastern Analytical, Inc. ID#:

92417

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Sample ID:	MW-4	MW-4D	MW-3D	DP-2	MW-3	EB-1
Lab Sample ID:	92417.07	92417.08	92417.09	92417.1	92417.11	92417.12
Matrix:	aqueous	aqueous	aqueous	aqueous	aqueous	aqueous
Date Sampled: Date Received:	9/1/10 9/2/10	9/2/10 9/2/10	9/2/10 9/2/10	9/2/10 9/2/10	9/2/10 9/2/10	9/2/10 9/2/10
Units:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Date of Extraction/Prep:	9/3/10	9/3/10	9/3/10	9/3/10	9/3/10	9/3/10
Date of Analysis:	9/8/10	9/8/10	9/8/10	9/8/10	9/8/10	9/8/10
Analyst:	JW	JW	JW	JW	JW	JW
Method:	8082	8082	8082	8082	8082	8082
Dilution Factor:	1	1	20	20	2000	1
PCB-1016	< 0.5	< 0.5	< 10	< 10	< 1000	< 0.5
PCB-1221	< 0.5	< 0.5	< 10	< 10	< 1000	< 0.5
PCB-1232	< 0.5	< 0.5	110	100	14000	< 0.5
PCB-1242	< 0.5	< 0.5	< 10	< 10	< 1000	< 0.5
PCB-1248	< 0.5	< 0.5	< 10	< 10	< 1000	< 0.5
PCB-1254	< 0.5	< 0.5	< 10	< 10	< 1000	< 0.5
PCB-1260	< 0.5	< 0.5	< 10	< 10	< 1000	< 0.5
TMX (surr)	84 %R	90 %R	109 %R	92 %R	109 %R	75 %R
DCB (surr)	95 %R	109 %R	124 %R	113 %R	104 %R	80 %R



QC REPORT

Eastern Analytical, Inc. ID#: 92417

Batch ID: 734018-55012/A090310PCB1

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.5	4.1 (103 %R)	4.0 (100 %R) (3 RPD)	9/7/2010	ug/l	40 - 140	20	8082
PCB-1221	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/7/2010	ug/l	40 - 140	20	8082
PCB-1232	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/7/2010	ug/l	40 - 140	20	8082
PCB-1242	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/7/2010	ug/l	40 - 140	20	8082
PCB-1248	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/7/2010	ug/l	40 - 140	20	8082
PCB-1254	< 0.5	< 0.5 (%R N/A)	< 0.5 (%R N/A) (RPD N/A)	9/7/2010	ug/l	40 - 140	20	8082
PCB-1260	< 0.5	3.9 (97 %R)	3.7 (93 %R) (4 RPD)	9/7/2010	ug/l	40 - 140	20	8082
TMX (surr)	87 %R	96 %R	91 %R	9/7/2010	% Rec	30 - 150		8082
DCB (surr)	97 %R	110 %R	99 %R	9/7/2010	% Rec	30 - 150		8082

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

Sample surrogate recoveries met the above stated criteria.

The method blanks were free of contamination at the reporting limits.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

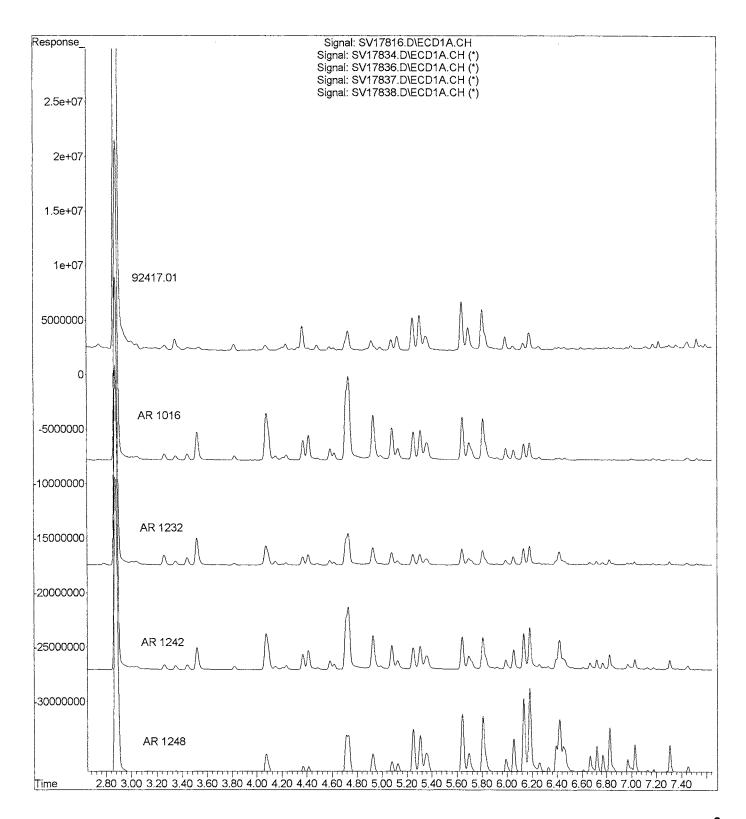
^{*} Flagged analyte recoveries deviated from the QA/QC limits.

File :C:\msdchem\1\DATA\2010\090710\SV17816.D

Operator : JW

Acquired: 07 Sep 2010 22:39 using AcqMethod PEST.M

Instrument : HP G1530A
Sample Name: 92417.01
Misc Info : A090310PCB1

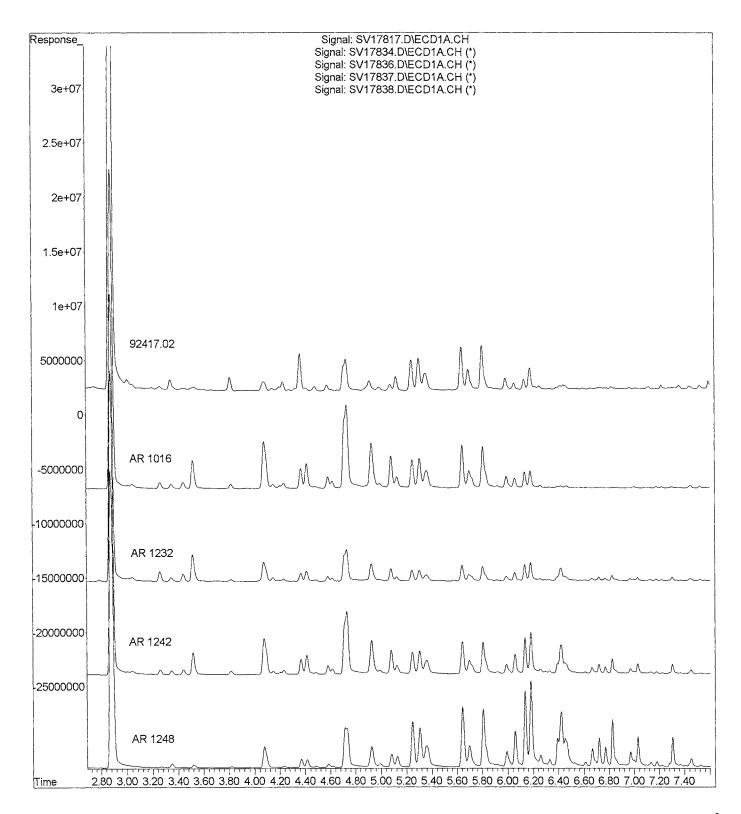


File :C:\msdchem\1\DATA\2010\090710\SV17817.D

Operator : JW

Acquired: 07 Sep 2010 22:54 using AcqMethod PEST.M

Instrument : HP G1530A
Sample Name: 92417.02
Misc Info : A090310PCB1

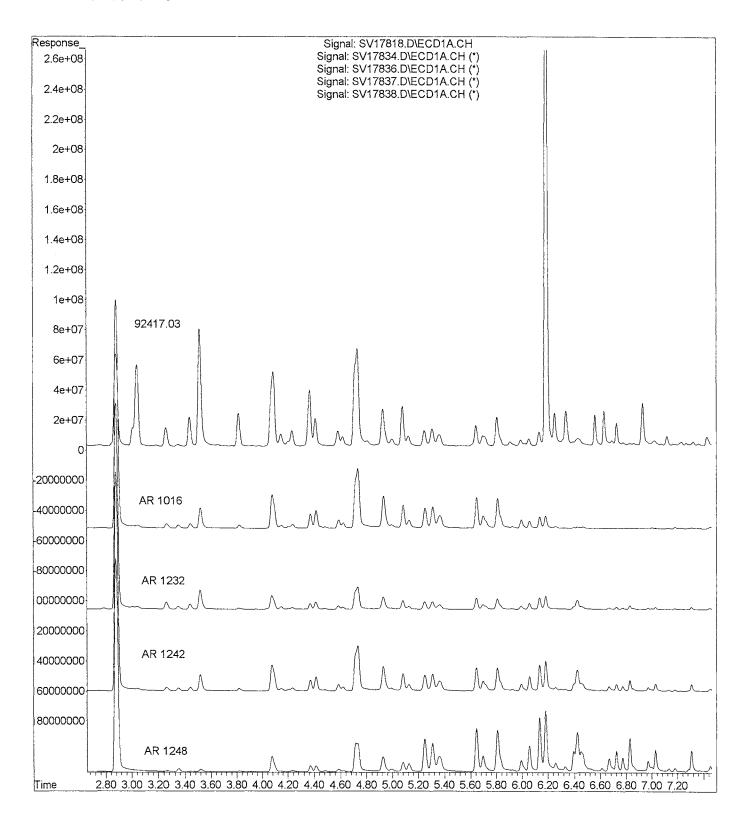


File :C:\msdchem\1\DATA\2010\090710\SV17818.D

Operator : JW

Acquired : 07 Sep 2010 23:09 using AcqMethod PEST.M

Instrument : HP G1530A
Sample Name: 92417.03
Misc Info : A090310PCB1

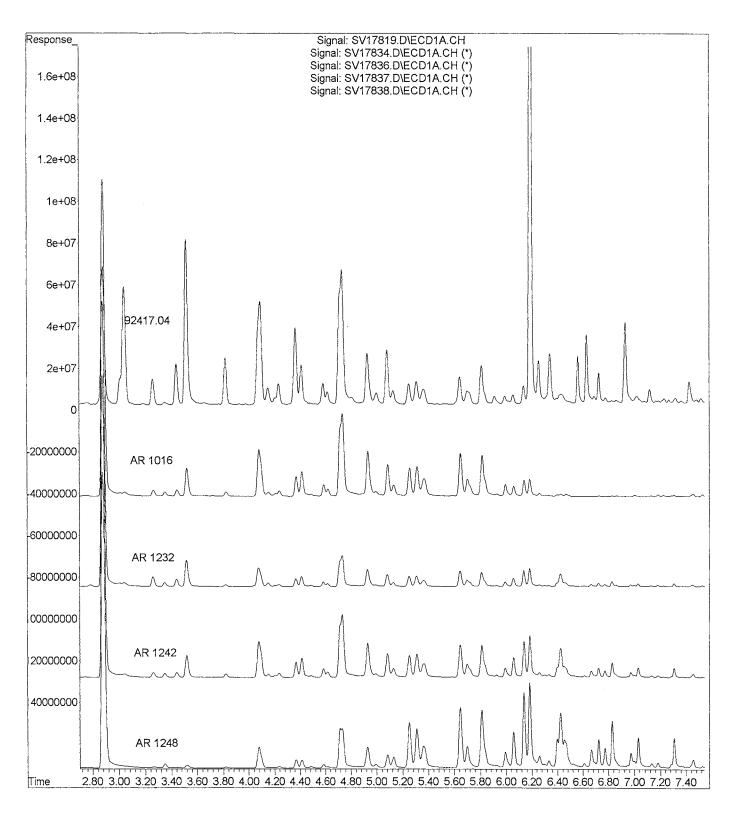


File :C:\msdchem\1\DATA\2010\090710\SV17819.D

Operator : JW

Acquired : 07 Sep 2010 23:24 using AcqMethod PEST.M

Instrument : HP G1530A
Sample Name: 92417.04
Misc Info : A090310PCB1

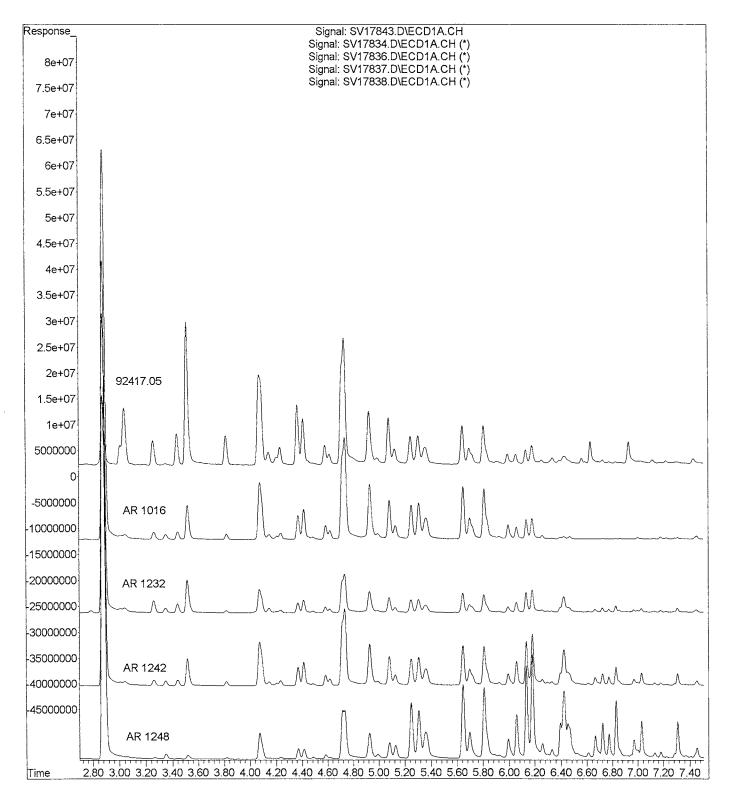


File :C:\msdchem\1\DATA\2010\090710\SV17843.D

Operator : JW

Acquired: 08 Sep 2010 10:27 using AcqMethod PEST.M

Instrument : HP G1530A
Sample Name: 92417.05 5X
Misc Info : A090310PCB1

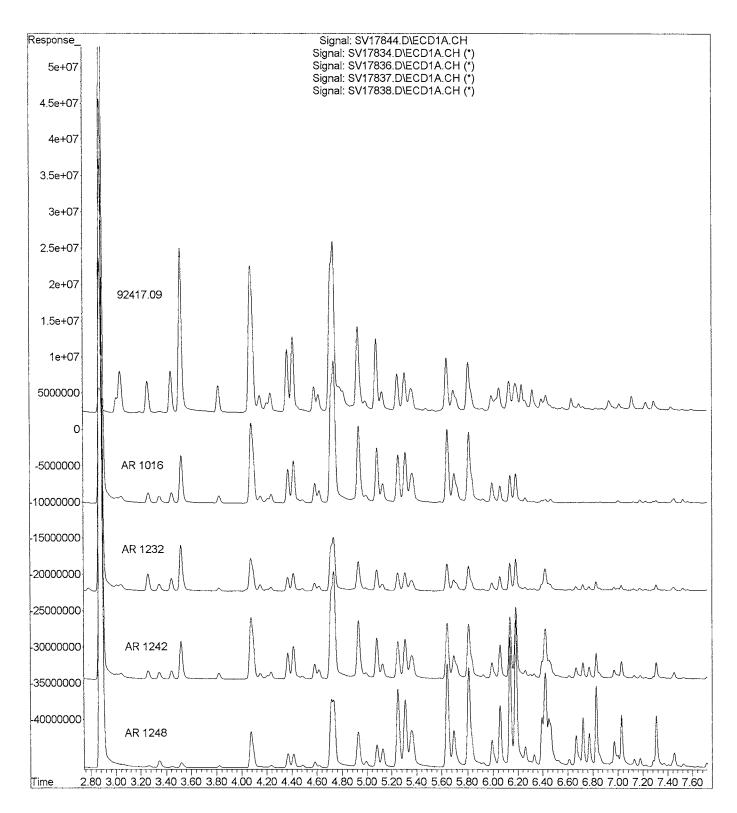


File :C:\msdchem\1\DATA\2010\090710\SV17844.D

Operator : JW

Acquired : 08 Sep 2010 10:42 using AcqMethod PEST.M

Instrument : HP G1530A
Sample Name: 92417.09 20X
Misc Info : A090310PCB1

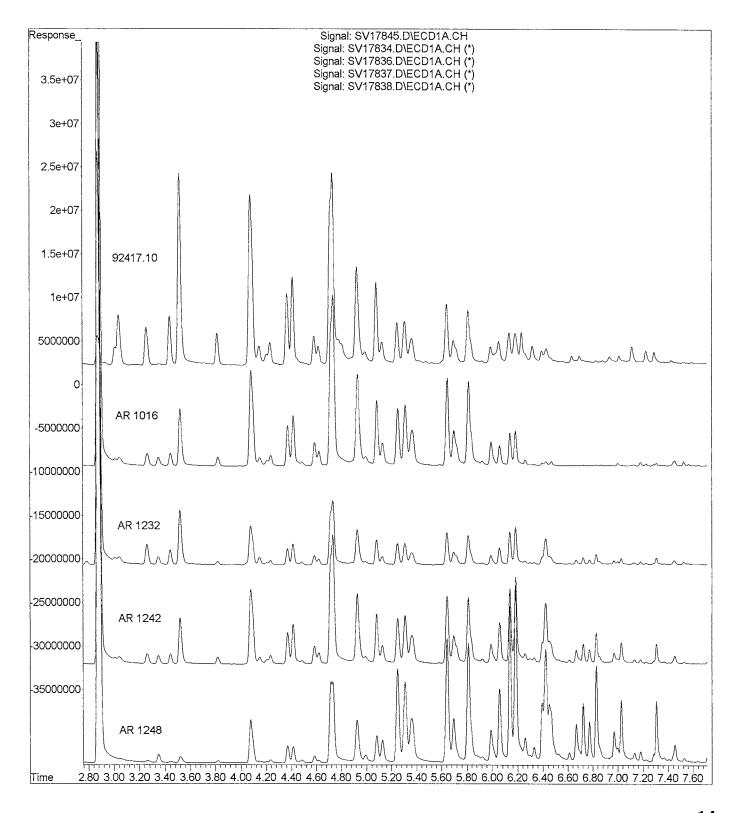


File :C:\msdchem\1\DATA\2010\090710\SV17845.D

Operator : JW

Acquired: 08 Sep 2010 10:57 using AcqMethod PEST.M

Instrument : HP G1530A
Sample Name: 92417.10 20X
Misc Info : A090310PCB1

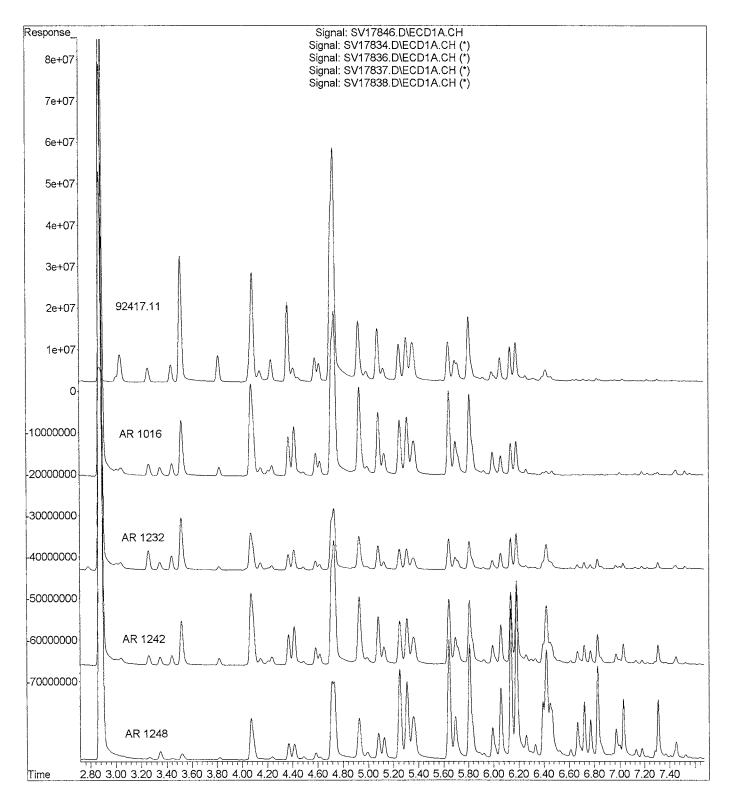


File :C:\msdchem\1\DATA\2010\090710\SV17846.D

Operator : JW

Acquired: 08 Sep 2010 11:12 using AcqMethod PEST.M

Instrument : HP G1530A
Sample Name: 92417.11 20X
Misc Info : A090310PCB1





Eastern Analytical, Inc. ID#:

92417

Client: The Johnson Company

Client Designation: Jard | 3-2218-3

Sample ID:

MW-3

Lab Sample ID:

92417.11

Matrix:

aqueous

Date Sampled:

9/2/10

Date Received:

Specific Gravity

9/2/10

Units

Analysis

Time Method Analyst Date

0.9769

None

9/09/10 12:30

2710F JCC

eastern analytical, inc.

www.eailabs.com

Phone: (603) 228-0525



October 07, 2010

Kathleen Noonan-Kelley Eastern Analytical, Inc. 25 Chenell Drive Concord, NH 03301

Amended SR#: E1000965

Project:

PCB Analysis - Method 1668A WHO 12 List

Dear Kathleen,

Revised test results are submitted in this amendment. In the original report, the result value for PCB169 was reported as 13300 pg/L. However, after further review, this value was discovered to be an interfering compound and PCB 169 should be reported as non-detected. The Total TEQ value is not significantly altered by this change since the inaccuracy was below the method reporting limit for this compound.

Please replace the paper pages of the original report with the enclosed numbered pages.

Sincerely,

COLUMBIA ANALYTICAL SERVICES, INC

Nicole Brown Project Manager, GC/HRMS 281-994-2959 nbrown@caslab.com





Certificate of Analysis

19408 Park Row, Suite 320, Houston, TX 77084 Phone (713)266-1599 Fax (713)266-0130 <u>www.caslab.com</u>

An Employee Owned Company

Client:

Eastern Analytical, Inc.

Service Request No.:

E1000965

Project:

PCB Analysis – Method 1668A WHO 12 List

Date Received:

09/03/10

Sample Matrix:

Water

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One water sample was received for analysis at Columbia Analytical Services on 09/03/10.

The following discrepancies were noted upon initial sample inspection: no custody seals on cooler. The exceptions are also noted on the cooler receipt and preservation form included in this data package.

The sample was received at 9°C in good condition and is consistent with the accompanying chain of custody form. Dioxin/furan compounds are stable at room temperature. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

B flags - Method Blanks

The Method Blank EQ1000422-01 contained low levels of PCB118 and PCB 105 below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with 'B' flags.

MS/MSD

EQ1000422: Laboratory Control Spike/Laboratory Control Spike Duplicate (LCS/LCSD) samples were analyzed and reported in lieu of an MS/MSD for this extraction batch. The batch quality control criteria were met.

Y flags - Labeled Standards

Samples that had recoveries of labeled standards outside the acceptance limits are flagged with 'Y' flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1, making these data acceptable.

Approved by _______ Date 10/06/10

Xiangqiu Liang, Laboratory Director

MRL

The sample MW-3 / E1000965-001 required a dilution due to the presence of elevated levels of target congeners. The undiluted and diluted results were combined into one Total TEQ summary report for each sample. This reports a 'Total' result that includes the most appropriate concentration found for the associated target congener.

For dilutions, we adjust the concentration of the labeled compounds to 100pg/uL in the extract, as required in Section 17.5 of Method 1668A. The clean-up standard concentration is not adjusted with the labeled standards, as the clean-up standard measures the extraction recoveries in the 1:1 extract. Please disregard the recoveries for the clean-up standard in the dilutions.

Additionally, in the original analysis, the poor chromatographic conditions caused one of the Recovery Standards, PCB-52L, to not be detected. As such, percent recoveries of labeled standards PCB-77L and PCB-81L were unable to be calculated. Quantitation of the target compounds was not affected, however. The Spike Conc. values in the dilution report are calculated relative to the recovery of the labeled standard in the original analysis, and therefore could not be calculated.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

Detection Limits

Detection limits are calculated for each congener in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEQ Summary results for each sample have been calculated by CAS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- > Non-detected compounds are not included in the 'Total'
- > The 1:1 and associated dilution have been combined into one TEQ Summary report

	Venog	Lung	
Approved by		/	Date 10/06/10

Xiangqiu Liang, Laboratory Director

Client: Project:

Eastern Analytical, Inc.

PCB Analysis - Method 1668A WHO 12 List

Service Request: E1000965

SAMPLE CROSS-REFERENCE

SAMPLE#

CLIENT SAMPLE ID

DATE

TIME

E1000965-001

MW-3

9/2/10

10:27

Page 147 of 244

Laboratory Certifications 2010-2011

STATE/PROGRAM	AGENCY	CERTIFICATION ID	EXP DATE
ARIZONA	AZ-DHS	AZ0725	05/27/11
ARKANSAS	ADEQ	10-035-0	06/16/11
California	CA-ELAP	2452	02/28/11
DOD ELAP	A2LA	2897.01	11/30/11
FLORIDA/NELAP	FL-DOHS	E87611	06/30/11
Hawaii	HI-DOH	N/A	06/30/11
ILLINOIS/NELAP	IL-EPA	002611	10/06/11
ISO 17025	A2LA	2897.01	11/30/11
LOUISIANA/NELAP	LELAP	03048	06/30/11
LOUISIANA/NELAP	LDHH	LA100032	12/31/10
Maine	ME-DOHS	2010041	06/05/12
MICHIGAN	MIDEQ	9971	06/30/11
MINNESOTA	MDH	048-999-427	12/31/10
Nevada	NDEP	TX014112010A	07/31/10
New Jersey	NJDEP	TX008	06/30/11
New Mexico	NMED-DWB	N/A	06/30/11
NEW YORK/NELAP	NY-DOH	11707	04/01/11
Окіанома	OKDEQ	2009-25	08/31/10
OREGON/NELAP	ORELAP	TX200002-006	03/24/10
PENNSYLVANIA/NELAP	PLAP	002	06/30/11
TENNESSEE	TNDEC	04016	06/30/11
TEXAS/NELAP	TCEQ	T104704216-10-1	06/30/11
UTAH/NELAP	UTELCP	COLU2	06/30/11
SOIL IMPORT PERMIT	USDA	P330-09-00067	03/27/12
WASHINGTON/NELAP	WA-Ecology	C1855	11/14/10
WEST VIRGINIA	WVDEP	347	06/30/11

Abbreviations, Acronyms & Definitions

Cal Calibration

Conc CONCentration

Dioxin(s) Polychlorinated dibenzo-p-dioxin(s)

EDL Estimated Detection Limit

EMPC Estimated Maximum Possible Concentration

Flags Data qualifiers

Furan(s) Polychlorinated dibenzofuran(s)

g Grams

ICAL Initial CALibration

ID IDentifier

lons Masses monitored for the analyte during data acquisition

L Liter (s)

LCS Laboratory Control Sample

DLCS Duplicate Laboratory Control Sample

MB Method Blank

MCL Method Calibration LimitMDL Method Detection LimitMRL Method Reporting Limit

mL Milliliters

MS Matrix Spiked sample

DMS Duplicate Matrix Spiked sample

NO Number of peaks meeting all identification criteria

PCDD(s) Polychlorinated dibenzo-p-dioxin(s)

PCDF(s) Polychlorinated dibenzofuran(s)

ppb Parts per billion
ppm Parts per million
ppq Parts per quadrillion
ppt Parts per trillion
On Onelity Assurance

QA Quality Assurance
QC Quality Control

Ratio Ratio of areas from monitored ions for an analyte

% Rec. Percent Recovery

RPD Relative Percent Difference
RRF Relative Response Factor

RT Retention Time

RRT Relative Retention Time
SDG Sample Delivery Group
S/N Signal-to-Noise ratio

TEF Toxicity Equivalence Factor
TEQ Toxicity Equivalence Quotient

Data Qualifier Flags – PCB Congeners

- o **B** Indicates the associated analyte is found in the method blank, as well as in the sample
- E Indicates an estimated value used when the analyte concentration exceeds the upper end of the linear calibration range
- J Indicates an estimated value used when the analyte concentration is below the method reporting limit (MRL) and above the estimated detection limit (EDL)
- K EMPC When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.
- o **U** Indicates the compound was analyzed and not detected
- Y Samples that had recoveries of labeled standards outside the acceptance limits are flagged with 'Y' flags. In all cases, the signal-to-noise ratios are greater than 10:1, making these data acceptable.
- ND Indicates concentration is reported as 'Not Detected'
- S Peak is saturated; data not reportable
- Q Lock-mass interference by ether compounds
- X See case narrative

COLUMBIA ANALYTICAL SERVICES, INC. – Houston Data Processing/Form Production and Peer Review Signatures

SR# Unique ID	E1000965	DB-5	DB-225	SPB-Octyl
First	Level - Data Processi	ng - to be filled by person of	generating the fo	orms
Date:	Analyst:	Samples:		
09/23/10	XX	-001	-	
Sec	cond Level - Data Rev	iew – to be filled by person	doing peer revie	ew .
Date: DOI	Analyst:	Samples: 801		
				W

COLUMBIA ANALYTICAL SERVICES, INC. – Houston Data Processing/Form Production and Peer Review Signatures

SR# Unique ID	E10009185	DB-5	DB-225	SPB-Octy)
First	Level - Data Processing -	to be filled by person ge	nerating the fo	orms
Date: 09 27 10	Analyst:	Samples: (DIX	***************************************	
			727	
Sec	ond Level - Data Review -	to be filled by person de	oing peer revi	ew
Date 9 30/10) Analyst: ()	Samples: Ø010L		

10 of 26



Analytical Results

19408 Park Row, Suite 320, Houston, TX 77084 Phone (713)266-1599 Fax (713)266-0130 <u>www.caslab.com</u>

An Employee Owned Company

Analytical Report

Client:

Eastern Analytical, Inc.

Project:

PCB Analysis - Method 1668A WHO 12 List

Sample Matrix:

Water

Service Request: E1000965 Date Collected: 9/2/10 1027

Date Received: 9/3/10

MW-3

Sample Name: Lab Code:

E1000965-001

Units: pg/L Basis: NA

Chlorinated Biphenyl Congeners by HRGC/HRMS

Analytical Method:

1668A

Prep Method:

Method

Sample Amount:

160mL

Data File Name: ICAL Date:

U223742

10/19/09

Date Analyzed: 9/15/10 1347

Date Extracted: 9/7/10 Instrument Name: E-HRMS-02

GC Column: SPB-OCTYL

Blank File Name: U223825 Cal Ver. File Name: U223737

Ion Dilution Analyte Name Result Q EDL MRL Ratio RRT **Factor** PCB 81 791000 18300 18300 0.81 1.000 **PCB 77** 16700000 E 21800 21800 0.81 1.001 1 PCB 123 640000 4820 15600 1.56 1.000 1 PCB 118 14900000 BE 5070 15600 1.53 1.000 1 PCB 114 893000 4750 15600 1.57 1.000 1 PCB 105 10800000 BE 5360 6250 1.56 1.000 1 PCB 126 91800 6240 15600 1.58 1.000 PCB 167 113000 1240 15600 1.27 1.001 1 PCBs 156 + 157 412000 1880 15600 1.25 1.000 1 PCB 169 ND U 1850 15600 1 PCB 189 11000 J 883 15600 1.01 1.000 1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
PCB 81L	10000	0	0	Y	25-150	0.81	
PCB 77L	10000	0	0	Y	25-150	0.80	
PCB 123L	10000	7183.917	72		25-150	1.55	1.133
PCB 118L	10000	7334.700	73		25-150	1.56	1.143
PCB 114L	10000	7799.749	78		25-150	1.61	1.159
PCB 105L	10000	7280.629	73		25-150	1.47	1.178
PCB 126L	10000	6552.472	66		25-150	1.63	1.268
CB 167L	10000	5499.563	55		25-150	1.28	1.071
CBs 156L + 157L	20000	10885.616	54		25-150	1.27	1.099
CB 169L	10000	4521.463	45		25-150	1.34	1.176
CB 189L	10000	6948.125	69		25-150	1.06	0.962
PCB 111L	10000	8688.606	87		30-135	1.50	1.076
CB 178L	10000	8216.587	82		30-135	1.02	1.010

Analytical Report

Client:

Eastern Analytical, Inc.

Project:

PCB Analysis - Method 1668A WHO 12 List

11000

883

Date Collected: 9/2/10 1027

Service Request: E1000965

Sample Matrix:

Water

Date Received: 9/3/10

Sample Name:

MW-3

Units: pg/L

Lab Code:

E1000965-001

Basis: NA

Chlorinated Biphenyl Congeners by HRGC/HRMS

Analytical Method: Prep Method:

1668A

Method

Dilution TEF - Adjusted Result DLFactor TEF Concentration Analyte Name PCB 81 791000 18300 1 0.0003 237 PCB 77 23700000 135000 20 0.00012370 PCB 123 640000 4820 0.00003 19.2 1 19500000 0.00003 PCB 118 14300 20 585 PCB 114 893000 4750 1 0.00003 26.8 PCB 105 13600000 15700 20 0.00003 408 PCB 126 91800 6240 1 0.1 9180 **PCB 167** 113000 1240 1 0.00003 3.39 PCBs 156 + 157 412000 1880 1 0.00003 12.4 PCB 169 ND 1850 0.03 1

> Total TEQ 12800

0.00003

0.330

1

2005 WHO TEFs, ND = 0

PCB 189

Analytical Report

Client:

Eastern Analytical, Inc.

Project:

PCB Analysis - Method 1668A WHO 12 List

Sample Matrix:

Water

Sample Name: Lab Code:

MW-3

E1000965-001

Service Request: E1000965

Date Collected: 9/2/10 1027 Date Received: 9/3/10

> Units: pg/L Basis: NA

Chlorinated Biphenyl Congeners by HRGC/HRMS

Analytical Method:

1668A

Prep Method:

Method

Sample Amount:

160mL

Data File Name:

ICAL Date:

U223774

10/19/09

Date Analyzed: 9/22/10 2104

Date Extracted: 9/7/10

Instrument Name: E-HRMS-02

GC Column: SPB-OCTYL

Blank File Name: U223825

Cal Ver. File Name: U223765

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor	
PCB 81	978000		142000	313000	0.79	1.001	20	
PCB 77	23700000		135000	313000	0.79	1.000	20	
PCB 123	699000		16000	313000	1.55	1.000	20	
PCB 118	19500000	В	14300	313000	1.60	1.000	20	
PCB 114	1070000		15000	313000	1.62	1.000	20	
PCB 105	13600000	В	15700	125000	1.56	1.001	20	
PCB 126	130000	J	19300	313000	1.64	1.001	20	
PCB 167	165000	J	1980	313000	1.29	1.000	20	
PCBs 156 + 157	611000		2920	313000	1.25	1.000	20	
PCB 169	ND 1	U	2820	313000			20	
PCB 189	13800	J	2440	313000	1.02	1.000	20	

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
PCB 81L	Infinity	9578.914	0	Y	25-150	0.80	1.332
PCB 77L	Infinity	10130.489	0	Y	25-150	0.82	1.353
PCB 123L	13900	9504.432	68		25-150	1.55	1.137
PCB 118L	13700	9941.211	73		25-150	1.63	1.146
PCB 114L	12800	9397.304	73		25-150	1.61	1.162
PCB 105L	13700	9949.192	73		25-150	1.60	1.181
PCB 126L	15200	11292.193	75		25-150	1.58	1.273
PCB 167L	18200	8529.924	47		25-150	1.29	1.071
PCBs 156L + 157L	37000	18545.068	50		25-150	1.27	1.099
PCB 169L	22200	9648.826	43		25-150	1.26	1.176
PCB 189L	14500	8655.668	60		25-150	1.04	0.962
PCB 111L	11500	389.144	3	Y	30-135	1.55	1.078
PCB 178L	12200	370.042	3	Y	30-135	1.07	1.010

Analytical Report

Client:

Eastern Analytical, Inc.

Project:

PCB Analysis - Method 1668A WHO 12 List

Sample Matrix:

Water

Sample Name: Lab Code:

Method Blank

EQ1000422-01

Service Request: E1000965

Date Collected: NA Date Received: NA

> Units: pg/L Basis: NA

Chlorinated Biphenyl Congeners by HRGC/HRMS

Analytical Method:

1668A

Prep Method:

Method 1000mL

Sample Amount:

Data File Name: ICAL Date:

U223825 10/19/09

Date Analyzed: 9/30/10 1948

Date Extracted: 9/7/10

Instrument Name: E-HRMS-02

GC Column: SPB-OCTYL Blank File Name: U223825

Cal Ver. File Name: U223823

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor	
PCB 81	ND	U	4.27	2500			1	
PCB 77	ND	U	4.41	2500			1	
PCB 123	ND	U	5.81	2500			1	
PCB 118	27.7	J	5.34	2500	1.44	1.001	1	
PCB 114	ND	U	5.66	2500			1	
PCB 105	9.69	J	5.94	1000	1.36	1.001	1	
PCB 126	ND	U	5.26	2500			1	
PCB 167	ND	U	2.89	2500			1	
PCBs 156 + 157	ND	U	4.12	2500			1	
PCB 169	ND	U	3.09	2500			1	
PCB 189	ND	U	4.95	2500			1	

eled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec Q	Control Limits	Ion Ratio	RRT
881L	10000	9364.242	94	25-150	0.79	1.332
3 77L	10000	9583.225	96	25-150	0.78	1.353
3 123L	10000	8432.404	84	25-150	1.57	1.136
3 118L	10000	8578.580	86	25-150	1.56	1.146
3 114L	10000	8271.310	83	25-150	1.58	1.162
105L	10000	8561.545	86	25-150	1.59	1.182
126L	10000	10215.666	102	25-150	1.53	1.272
167L	10000	8111.954	81	25-150	1.31	1.071
s 156L + 157L	20000	17535.704	88	25-150	1.25	1.099
169L	10000	9178.241	92	25-150	1.29	1.176
3 189L	10000	8152.773	82	25-150	1.03	0.962
3 11 1L	10000	8687.090	87	30-135	1.56	1.078
178L	10000	8067.927	81	30-135	1.03	1.010



Accuracy and Precision

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QA/QC Report

Client:

Eastern Analytical, Inc.

Project:

PCB Analysis - Method 1668A WHO 12 List

Date Analyzed: 9/15/10

Service Request: E1000965

Sample Matrix:

Water

Lab Control Sample Summary Chlorinated Biphenyl Congeners by HRGC/HRMS

Analytical Method:

Prep Method:

1668A

Method

Units: pg/L

Basis: NA

Extraction Lot: 118668

Lab Control Sample

Duplicate Lab Control Sample

	I	EQ1000422-0	2	•	EQ1000422-03	3			
		Spike			Spike		% Rec		RPD
Analyte Name	Result	Amount	% Rec	Result	Amount	% Rec	Limits	RPD	Limit
PCB 81	6090	5000	122	6010	5000	120	50 - 150	2	50
PCB 77	6000	5000	120	6100	5000	122	50 - 150	2	50
PCB 123	5950	5000	119	5850	5000	117	50 - 150	2	50
PCB 118	5620	5000	112	5590	5000	112	50 - 150	<1	50
PCB 114	5830	5000	117	5730	5000	115	50 - 150	2	50
PCB 105	6000	5000	120	5900	5000	118	50 - 150	2	50
PCB 126	5720	5000	114	5710	5000	114	50 - 150	<1	50
PCB 167	6260	5000	125	6160	5000	123	50 - 150	2	50
PCBs 156 + 157	12100	10000	121	11900	10000	119	50 - 150	2	50
PCB 169	6220	5000	124	6150	5000	123	50 - 150	<1	50
PCB 189	6210	5000	124	6200	5000	124	50 - 150	<1	50

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Report

Client:

Eastern Analytical, Inc.

Project:

PCB Analysis - Method 1668A WHO 12 List

Sample Matrix:

Water

Sample Name:

Lab Control Sample

Lab Code:

EQ1000422-02

Service Request: E1000965

Date Collected: NA Date Received: NA

> Units: pg/L Basis: NA

Chlorinated Biphenyl Congeners by HRGC/HRMS

Analytical Method:

1668A

Prep Method:

Method

Sample Amount:

1000mL

Data File Name: ICAL Date:

10/19/09

U223738

Date Analyzed: 9/15/10 0916

Date Extracted: 9/7/10 Instrument Name: E-HRMS-02

GC Column: SPB-OCTYL Blank File Name: U223825

Cal Ver. File Name: U223737

Analyte Name	Result Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor	
PCB 81	6090	4.87	2500	0.79	1.000	1	
PCB 77	6000	4.89	2500	0.78	1.000	1	
PCB 123	5950	31.9	2500	1.56	1.000	1	
PCB 118	5620	30.1	2500	1.54	1.000	1	
PCB 114	5830	32.1	2500	1.57	1.001	1	
CB 105	6000	33.2	1000	1.56	1.001	1	
CB 126	5720	29.6	2500	1.58	1.001	1	
CB 167	6260	11.8	2500	1.27	1.000	1	
PCBs 156 + 157	12100	17.4	2500	1.26	1.000	1	
CB 169	6220	12.8	2500	1.28	1.000	1	
PCB 189	6210	4.68	2500	1.01	1.000	1	

beled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec Q	Control Limits	Ion Ratio	RRT
B 81L	10000	8183.154	82	25-150	0.79	1.332
B 77L	10000	8679.799	87	25-150	0.79	1.353
B 123L	10000	7227.653	72	25-150	1.57	1.137
B 118L	10000	7387.298	74	25-150	1.54	1.146
B 114L	10000	7082.153	71	25-150	1.57	1.162
B 105L	10000	7242.533	72	25-150	1.58	1.181
B 126L	10000	8745.445	87	25-150	1.58	1.272
B 167L	10000	6123.170	61	25-150	1.29	1.071
Bs 156L + 157L	20000	13008.641	65	25-150	1.29	1.099
B 169L	10000	6901.809	69	25-150	1.24	1.176
B 189L	10000	7430.172	74	25-150	1.03	0.962
EB 111L	10000	8867.372	89	30-135	1.55	1.078
EB 178L	10000	8520.559	85	30-135	1.04	1.010

Analytical Report

Client:

Eastern Analytical, Inc.

Project:

PCB Analysis - Method 1668A WHO 12 List

Sample Matrix:

Water

Sample Name:

Duplicate Lab Control Sample

Lab Code:

EQ1000422-03

Service Request: E1000965

Date Collected: NA Date Received: NA

> Units: pg/L Basis: NA

Chlorinated Biphenyl Congeners by HRGC/HRMS

Analytical Method:

Prep Method: Sample Amount: Method 1000mL

Data File Name:

ICAL Date:

U223739 10/19/09

1668A

Date Analyzed: 9/15/10 1022 Date Extracted: 9/7/10 Instrument Name: E-HRMS-02 GC Column: SPB-OCTYL

Blank File Name: U223825 Cal Ver. File Name: U223737

Analyte Name	Result Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor	
PCB 81	6010	2.51	2500	0.80	1.000	1	
PCB 77	6100	2.62	2500	0.79	1.000	1	
PCB 123	5850	102	2500	1.55	1.000	1	
PCB 118	5590	96.1	2500	1.51	1.000	1	
PCB 114	5730	98.8	2500	1.57	1.001	1	
PCB 105	5900	101	1000	1.57	1.000	1	
PCB 126	5710	93.1	2500	1.54	1.000	1	
PCB 167	6160	5.49	2500	1.26	1.000	1	
PCBs 156 + 157	11900	7.75	2500	1.26	1.000	1	
PCB 169	6150	5.81	2500	1.28	1.000	1	
PCB 189	6200	4.18	2500	1.00	1.001	1	

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec Q	Control Limits	Ion Ratio	RRT
PCB 81L	10000	8659.064	87	25-150	0.80	1.332
PCB 77L	10000	8899.680	89	25-150	0.78	1.353
PCB 123L	10000	7523.436	75	25-150	1.56	1.137
PCB 118L	10000	7673.734	77	25-150	1.55	1.146
PCB 114L	10000	7487.539	75	25-150	1.58	1.162
PCB 105L	10000	7762.373	78	25-150	1.58	1.181
PCB 126L	10000	9468.703	95	25-150	1.56	1.272
PCB 167L	10000	6860.543	69	25-150	1.24	1.071
PCBs 156L + 157L	20000	14758.510	74	25-150	1.27	1.099
PCB 169L	10000	7785.819	78	25-150	1.26	1.176
PCB 189L	10000	7691.377	77	25-150	1.02	0.962
PCB 111L	10000	9800.220	98	30-135	1.58	1.078
PCB 178L	10000	9847.183	98	30-135	1.02	1.010



Chain of Custody

19408 Park Row, Suite 320, Houston, TX 77084 Phone (713)266-1599 Fax (713)266-0130 <u>www.caslab.com</u>

An Employee Owned Company

Page 162 of 244

CHAIN-OF-CUSTODY RECORD

eastern analytical professional laboratory services

37

163 of 244

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
MW-3	9/2/2010	aqueous	Chlorinated Biphenyl Congeners by HRGC/HRMS Method 1668A	

Eastern Analytical Inc. PO Number 25919 Stal EAI SRB# 92417 Project State: VT Results Needed by: Preferred date Call if RUSH surcharges will be applied. Project ID: 2480 QC Deliverables □A □A+ 図B □B+ □C □PC CAS (TX) Columbia Analytical Company Notes about project 19408 Park Row; Suite 320 Address Houston, TX 77084 Address Account# 713-266-1599 Phone # 713-266-0130 Date/Time Received by Relinquished by Fax Number Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 1-800-287-0525 Fax: (603)228-4591

Columbia Analytical Services, Inc. Cooler Receipt Form

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Sample Acceptance Policy

Custody Seals (desirable, mandatory if specified in SAP):

- ✓ On outside of cooler
- ✓ Seals intact, signed and dated

Chain-of-Custody documentation (mandatory):

- ✓ Properly filled out in ink & signed by the client
- ✓ Sign and date the coc for CAS/HOU upon cooler receipt
- ✓ Coc must list method number
- ✓ If no coc was submitted with the samples, complete a CAS/HOU coc for the client

Sample Integrity (mandatory):

- ✓ Sample containers must arrive in good condition (not broken or leaking)
- ✓ Sample IDs on the bottles must match the sample IDs on the coc
- ✓ The correct type of sample bottle must be used for the method requested
- ✓ The correct number of sample containers received must agree with the documentation on the coc
- ✓ The correct sample matrix must appear on the coc
- ✓ An appropriate sample volume or weight must be received

Preservatives (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C
- ✓ TO-9A air samples can be shipped and stored at ambient temperature, ~23°C, Method 23 samples must be shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the coc
- ✓ Notify a Project Chemist if any samples are outside the acceptance temperature or have compromised sample integrity the client must decide re: replacement sample submittal or continue with the analysis
- ✓ pH and chlorine adjustments must be performed as required for the applicable methods

Cooler Receipt Form, CRF (mandatory):

- ✓ Cooler receipt forms must be completed for each coc & SR# and at the time of cooler receipt
- ✓ Sample integrity issues must be documented on the CRF
- ✓ A scan of the carrier and the airbill number must be recorded in CAS LIMS

Sample Integrity Issues/Resolutions (mandatory):

- ✓ Sample integrity issues are documented on the CRF and given to the Project Chemist for resolution with the client
- Client resolution is documented in writing (typically email or on the CRF) and filed in the project folder(s)

- 1000 mL-Glass Bottle WM AMBER Teflon Liner Unpreserved

Location: E-Disposed

Service Request Summary

Folder #:

E1000965

Client Name:

Eastern Analytical, Inc.

Project Name:

PCB Analysis - Method 1668A WHO 12 List

Project Number:

Report To:

Scott Kelley

Eastern Analytical, Inc.

25 Chenell Dr

Concord, NH 03301

Phone Number:

603 228 0525

Cell Number:

Fax Number:

603 228 4591

E-mail:

skelley@eailabs.com

Project Chemist: Nicole Brown

Originating Lab: HOUSTON

Logged By: CDONOVAN

Date Received: 9/3/10 Internal Due Date: 9/28/10

QAP: 1668 100uL FV Qualifier Set: CAS Standard Formset: CAS Standard

Merged?: N

Report to MDL?: Y

P.O. Number:

EDD: No EDD Specified

SVM Biphen Cong CAS Samp No Client Samp No. Matrix Collected E1000965-001 MW-3 Water 9/2/10 1027 \mathbf{II}

Folder Comments:

Who 12 list

Test Comments:

Group	Test/Method	Samples	Comments	
Semivoa GCMS	Cl Biphen Cong/1668A	1	DL 09/21/10 ASB	

24 of 26 Service Request for E1000965

Status: Prepped

Prep Run#: 118668

Semivoa GCMS/AKODUR

Prep WorkFlow: OrgExtAq(365) Prep Method: Method

Preparation Information Benchsheet

Prep Date/Time: 9/7/10 11:37 AM

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				of 24
				167

#	Lab Code	Client ID	B#	Method /Test	рН	Matrix	Amt. Ext.	Sample Description	
	E1000958-001	2010-5-SW3	.01	1668A/Cl Biphen Cong		Storm Water	880mL	yellow clear liquid	ĺ
2	E1000965-001	MW-3	.01	1668A/Cl Biphen Cong		Water	160mL	beige peach cloudy liquid	1
3	EQ1000422-01	МВ		1668A/Cl Biphen Cong		Liquid	1000mL		1
4	EQ1000422-02	LCS		1668A/Cl Biphen Cong	1	Liquid	1000mL		1
5	EQ1000422-03	DLCS		1668A/Cl Biphen Cong		Liquid	1000mL		1
- C	niking Salutions		*******		******	<u>'</u>			3

Spiking Solutions

Team:

Name:	1668A Clean Up W	Vorking Standard	In	ventory ID 21263		Logbook Ref:	B3-31-1		Expires On:	09/02/2011
E1000958-	-001 100.00μL	E1000965-001	100.00µL	EQ1000422-01	100.00µL	EQ1000422-02	100.00µ	L EQ1000422-03 100.00μL		
Name:	1668A Labeled Wo	orking Standard	In	ventory ID 21372		Logbook Ref:	B3-31-2		Expires On:	09/07/2011
E1000958-	-001 1,000.00μL	E1000965-001	1,000.00µL	EQ1000422-01	1,000.00µL	EQ1000422-02	1,000.00	pµL EQ1000422-03 1,000.00µL	,	
Name:	1668A Working M	atrix Standard	In	ventory ID 21373		Logbook Ref:	B3-31-3		Expires On:	09/07/2011
EQ100042	2-02 1,000.00μL	EQ1000422-03	1,000.00µL							
Preparati	on Materials									
Sensafe Free CHK	Chlorine WTR	C2-35-001 (15785)		Acetone 99.5% Minim	ım	C2-39-7 (19146)		Glass Wool	C2-42-6 (19656)	
Sulfuric Acid	d Reagent Grade	C2-40-2 (19147)		Dichloromethane (Metl Chloride) 99.9% MeCl	•	C2-42-4 (19654)		Sodium Thiosulfate Anhydrous Reagent Grade NaS2O3	C2-37-5 (19136)	
Sodium Hyd Grade NaOH	roxide Reagent	C2-40-5 (19149)		Sodium Sulfate Anhydi Reagent Grade Na2SO	ous	C2-43-1 (19711)		Hexane (n-Hexane) 98.5% Minimum	C2-42-3 (19653)	
Nonane (n-N	Ionane) 99%	C2-33-001 (13944)		Silica Gel Reagent Gra		C2-38-6 (19140)		Toluene 99.9% Minimum	C2-42-5 (19655)	
Preparati	on Steps									
Step:	Extraction	Step:	Acid Clean	Step:	Silica Ge	l Clean	Step:	Final Volume		
Started:	9/7/10 11:37	Started:	9/8/10 08:00	Started:	9/8/10 08		Started:	9/10/10 15:05		
Finished:	9/7/10 12:13	Finished:	9/8/10 08:00	Finished:	9/8/10 10		Finished:	9/10/10 16:30		
By:	AKODUR	By:	AKODUR	Ву:	AKODU.	R	By:	AKODUR		

Comments:

Preparation Information Benchsheet

Prep Run#: 118668

Team:

Semivoa GCMS/AKODUR

Prep WorkFlow: OrgExtAq(365)

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/7/10 11:37 AM

42

Reviewed By:	ak	Date:	9/16/10			
Chain of Custody						
Relinquished By	y:		Date:		Extracts Examined	1
Received By:			Date:		Yes No	···
				26 of 26		

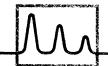
HRS Reference #65

Page ___l of __l

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Mart		SAMPLING DATE / TIME *IF COMPOSITE,	((SEE BELOW	524.2 MTBE ONLY VTICS EDB DBCP	EX HALOS MEGRO MAVPH	S SVIICE DEAL) a =	MEDRO MAEPH	1664 TPH 1664	ABN METALS Herb	TALS (LIST BELOW)	(LIST BELOW)	TDS SPEC. CON. F SO,	NU ₂ /NU ₃ D T, ALK.	T. PHOS.	. Chlorine	015 TOC	TOTAL SULFIDE DE REACTIVE SULFIDE	SCHITABILITY E. COLI		<u>ک</u> اق			ERS	
Mart	SAMPLE 1.D.	Start & Finish Date Time	MATRIX GRAB/*	524.2 BTEX 8260B 624 1, 4 Dioxane	80218 BT 80158 GR0	23 A #25	TPH8100	8015B DRO PEST 608	OIL & GREASE	TCLP 1311 VOC PEST	DISSOLVED ME	TOTAL METALS	75 758 Cl 03	ROD CBOI	TKN NH3	pH T. RES	COD PHEN	TOTAL CYANIDE REACTIVE CYANI	FLASHPOINT T. COLIFORM	F. COLIFORM ENTEROCOCCI	PCA (3			Notes MeOH Vial #
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professional laboratory services

(WHITE: ORIGINAL GREEN: PROJECT MANAGER)



eastern analytical, inc.

professional

Daniel Baston The Johnson Company 100 State Street

Montpelier, VT 05602

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 92918

Client Identification: JARD | 3-2218-3

Date Received: 9/21/2010



Dear Mr. Baston:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted

< : "less than" followed by the reporting limit

> : "greater than" followed by the reporting limit

%R: % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

of pages (excluding cover letter)

Eastern Analytical, Inc. 25 Chenell Drive Concord NH 3361 www.eailabs.com

TEL 603 238 (2525 - 1537 257 (253) TAN 603 228 45 H

HRS Reference #65



Eastern Analytical, Inc. ID#:

92918

Client: The Johnson Company

Client Designation: JARD | 3-2218-3

Temperature upon receipt (°C): 7.2

Received on ice or cold packs (Yes/No): Y

Lab ID	Sample ID	Date Received	Date I Sampled	Sample Matrix	Exceptions/Comments (other than thermal preservation)
92918.01	Greene	9/21/10	9/20/10	aqueous	Sample temperature exceeded 6° upon receipt
92918.02	Watson	9/21/10	9/20/10	aqueous	Sample temperature exceeded 6° upon receipt

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater: Inorganics, 19th Edition, 1995; Microbiology, 20th Edition, 1998
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992

eastern analytical, inc.

www.eailabs.com

Phone: (603) 228-0525



LABORATORY REPORT

Eastern Analytical, Inc. ID#:

92918

Client: The Johnson Company

Client Designation: JARD | 3-2218-3

Sample ID:	Greene	Watson
Lab Sample ID:	92918.01	92918.02
Matrix:	aqueous	aqueous
Date Sampled:	9/20/10	9/20/10
Date Received:	9/21/10	9/21/10
Units:	ug/l	ug/l
Date of Extraction/Prep:	9/23/10	9/23/10
Date of Analysis:	9/24/10	9/24/10
Analyst:	JW	JW
Method:	8082	8082
Dilution Factor:	1	1
PCB-1016	< 0.3	1.8
PCB-1221	< 0.3	< 0.3
PCB-1232	< 0.3	< 0.3
PCB-1242	< 0.3	< 0.3
PCB-1248	< 0.3	< 0.3
PCB-1254	< 0.3	< 0.3
PCB-1260	< 0.3	< 0.3
TMX (surr)	67 %R	68 %R
DCB (surr)	87 %R	71 %R

Sample Watson: The sample contains more of the heavier Aroclor 1016 congeners than what would normally be expected. The concentration of Aroclor 1016 may be underestimated. Refer to the sample chromatogram overlay for more details. The column percent difference exceeded 40%. The highest concentration was reported.

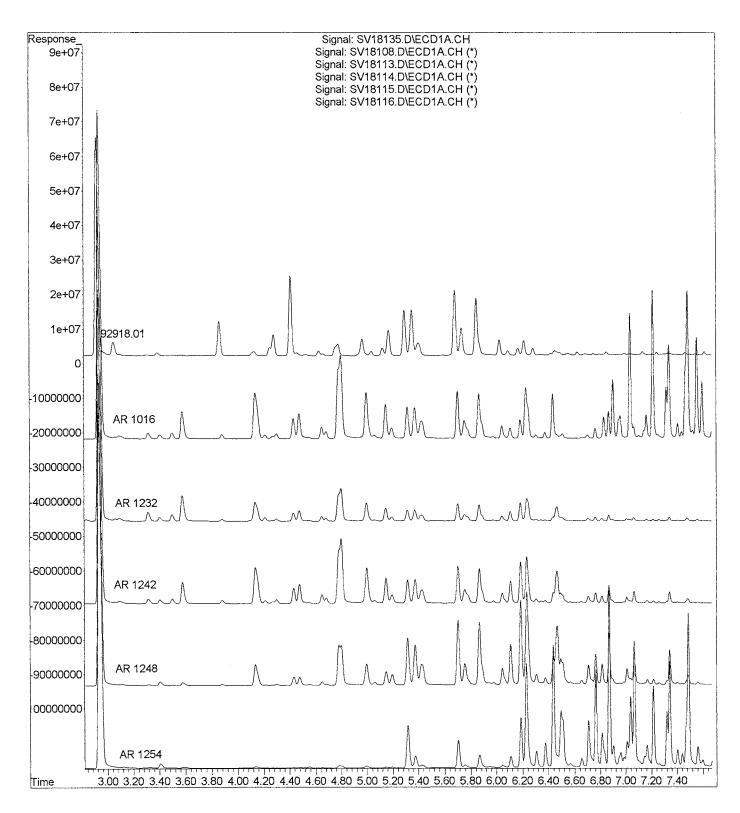
File :C:\msdchem\1\DATA\2010\092310\SV18135.D

Operator : JW

Acquired : 24 Sep 2010 00:41 using AcqMethod PEST.M

Instrument : HP G1530A
Sample Name: 92918.02
Misc Info : A092310PCB1

Vial Number: 49





QC REPORT

Eastern Analytical, Inc. ID#: 92918

Batch ID: 734038-47330/A092310PCB1

Client: The Johnson Company

Client Designation: JARD | 3-2218-3

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
PCB-1016	< 0.3	2.1 (105 %R)	2.3 (117 %R) (11 RPD)	9/24/2010	ug/l	40 - 140	20	8082
PCB-1221	< 0.3	(%R N/A)	(%R N/A) (RPD N/A)	9/24/2010	ug/l	40 - 140	20	8082
PCB-1232	< 0.3	(%R N/A)	(%R N/A) (RPD N/A)	9/24/2010	ug/l	40 - 140	20	8082
PCB-1242	< 0.3	(%R N/A)	(%R N/A) (RPD N/A)	9/24/2010	ug/l	40 - 140	20	8082
PCB-1248	< 0.3	(%R N/A)	(%R N/A) (RPD N/A)	9/24/2010	ug/l	40 - 140	20	8082
PCB-1254	< 0.3	(%R N/A)	(%R N/A) (RPD N/A)	9/24/2010	ug/l	40 - 140	20	8082
PCB-1260	< 0.3	2.5 (126 %R)	2.6 (129 %R) (2 RPD)	9/24/2010	ug/l	40 - 140	20	8082
TMX (surr)	71 %R	67 %R	72 %R	9/24/2010	% Rec	30 - 150	20	8082
DCB (surr)	96 %R	83 %R	88 %R	9/24/2010	% Rec	30 - 150	20	8082

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

Phone: (603) 228-0525

^{*} Flagged analyte recoveries deviated from the QA/QC limits.

				V	oc			S١	VO	C		TCL	ME	TALS			N	ORC	146	IIC	S		Mi	CRO	O	П	IER				
Sample I.D.	Sampling Date/Time *If Composite, Indicate Both Start & Finish Date/Time	MATRIX (SEE BELOW)	GRAB/*COMPOSITE	524.2 524.2 BTEX 524.2 MTBE ONLY 8260B 624 VTICS	8021B BTEX HALOS	8015B GRO MEGRO MAVPH	8270C 625 SYTICS ABN A BN PAH	TPH8100 11 1.2	8015B DRO MEDRO MAEPH	PEST 608 PCB 608 PEST 8081A CPCB 8082	OIL & GREASE 1664 TPH 1664	TCLP 1311 ABN METALS	DISSOLVED METALS (LIST BELOW)	TOTAL METALS (LIST BELOW)	TS TSS TDS SPEC. CON.	Br Cl F 504 NO. NO. NO./NO.	BOD CBOD T. ALK.	TKN NH, T. PHOS.	1	СОО РИЕМОЦЅ ТОС	Total Cyanide Total Sulfide	REACTIVE CYANIDE REACTIVE SULFIDE	T. COLIFORM E. COLI	ENTROCOCCI HETBOTROPHIC PLATE COUNT	ILLIENDINGFRIC LAIE COUNT			# OF CONTAINERS	N 0 1 Me04 V	res Mal #	Dage 175 of 244
Greene	9/20/10 11:35	DU	6							X					ļ					ļ						<u> </u>		Ì			
Watson	9/20/10 12:16	DW	G		_	<u> </u>				X			<u> </u>												-		-				
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MATRIX: A-AIR; S-SOIL; GW-GROUND WAT WW-WASTE WATER PRESERVATIVE: H-HCL; N-HNO ₃ ; S-H ₂ SO ₄ ;		KING V	VATER;																					-							
PROJECT MANAGER: Dan COMPANY: The Johns ADDRESS: LOO State S	Raston	-1				ATE	NE	EDEC	o: ⊊	itzen				FA 10 01					<u>ا</u>		°C						13 PP	F	e, Mn	Pв, Cu	
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E-MAIL: DPBQ JCOM							MPTIV										·					ļ									ıc
SITE NAME: JARD PROJECT #: 3-2218-3	3				SAM	1PLER	(S):	ctc	6	o C	opp	Dlin	٥.	<u></u>	200	Yac	D	esç											viánu fa)Ce #6
STATE: NH MA ME	OTHER:				Re	THE	HISH	ED B)	The state of the s	-	DATE:	?/ <i>]/</i> /	٠	<u>a・フ</u> Time:	1 T	-G	CEIVED	BY:	9-] —											ferer
REGULATORY PROGRAM: NPDES: RG GWP. OIL FUND.	FP POTW STORMWATER OR BROWNFIELD OR OTHER:				12		al		//	_ `(9/2	1/10	2_	: 2	-	M.	DAZ CEIVED	AVE RV.	Li	Rin	, L	SITI	E HISTO	RY:	Ca	pa	cita	25	Manu fa	chun	198
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APPENDIX D

FIELD FORMS

HRS Reference #65 Page 176 of 244

Phone: (802) 229-4600 Fax: (802) 229-5876 www.johnsonco.com

Monthener	, 41 03002	Chausa	Weter Moni	toning Wall S	ample Collecti	on Decord		Johnsoneon	
Project Nar	ne: JA		i water Moni		ample Collecti Project #: <u>3 - '</u>		Well ID:^	<u>lw-1</u>	
	And the second	uningta,	VT		Date: 9-1				Alteria National
	and the second second	Su 8				the same of the	· Fime on Site:_	11:00	
		ATA: (from TO	* * * * * * * * * * * * * * * * * * * *						
Description	of measurin	g point (MP)	73p of p	VC com	Dept	n to water below	w MP (ft):	9.80	i e e e e e e e e e e e e e e e e e e e
Total well	depth (ft):	13.58	Well	Dia.(in): 2.	O Leng	th of water colu	ımn in well (fi): 3-7 <u>/</u>	<u>P</u>
Gallons pe	r foot ¹ :	0.16	Well	volume (gal):_	0.6				
2. PURGIN	G DATA: M	ethod:	Cem.	h	Sta	bilized intake d	lepth: 12.C	<u>)</u>	
and the state of t	and the second	well volum	Annual Control of the Control						ain)
Parameter	equipment:	YSI, turbidir	meter						
ime	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
1:20	9.80	0	0	start	_	•		Train.	W I
1:25	9.98	(200	19.37	65	2.86	5.97	105	18
1:30	10,05	2	200	19.05	64	2-67	5.92	112	8
11:35	10.03	3	200	18.85	63	2.42	5.94	110	7
(1:40	10.08	Ч	200	18.88	63	240	5.93	/11	7
1:45	10,08	5	200	18.90	64	2.38	5,92	711	6
11:20	10.08	6	200	18.87	64	2.37	5.93	110	6
11:55	10.09	7	700	18.90	64	2-38	5.93	111	6
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	1 Method Drum				
SAMPLE COLLI	ECTION: Method:	Peust. P	<u>'~1</u>	Sample Time:	12:00
ample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
G W	JARD-3	EAI	2-16 glas	ے انو	8082 FAI
		1			
				447444	
ⁱ well volun	nes for various diameters	in gal./ft.	<u></u>		
0.50" = 0.0 2.00" = 0.1	0.75" = 0.023 3.00" = 0.32	1.00" = 0.041 1 3.50" = 0.50 4			
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1 -					

HRS Reference #65

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Phone: (802) 229-4600 Fax: (802) 229-5876 www.johnsonco.com

Montpelier	, VT 05602	USA					www.	<u>johnsonco.</u>	.com
			l Water Moni	and the second	ample Collect Project #: <u>2 ′</u>		Well ID:	nw-2	
		JARD							
Site Location	on: <u>13</u>	enning to	<u>~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ </u>		•		•		A. 39
Weather Co	onditions:	Sv.	8005				Time on Site:	18:20	<u> </u>
1. WATER	LEVEL DA	ATA: (from TO	C)					inida. Malayi Malay	
Description	of measurin	g point (MP)	Topof	PUC	Dept	h to water belo	w MP (ft):	8.08	· · · · · · · · · · · · · · · · · · ·
	A SECTION AND A SECTION AND ADMINISTRATION ADMINISTRATION AND ADMINIST	9.58		A.			and the first of the second		 .
Gallons per	r foot¹:	0.16	Well	volume (gal):_	0.24				
2. PURGIN	G DATA: M	ethod:	Perst. P	~y	Str	abilized intake o	lepth: 9.	<u> </u>	
		well volum		• •					min)
	- '	YSI, turbidi				A Transaction		Patie i	
			Flow Rate	Cristian Control			2,5 x 5 x	trapy of	·
ne	Depth (ft.)	volume removed (liters)	(mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
; 3 0	8.08	0	0	stat	(1	Dayis.	.
5:35	8.08	ه.۶	loo	18,61	58	3.15	6.13	16	10
6.40	8,04	(.0	100	18.65	58	7.93	6.12	118	7
6:45	8.09	(.5	100	18.62	8 2	2.88	01.3	124	8
8:50	8,09	2.0	100	18.81	58	2.74	6.07	126	7
s 55	8.09	کہ ۶	100	18.60	SE	270	6.06	129	7
9700	8,09	₹.0	(00	18. 63	82	2.68	6.06	130	6
9:05	8,09	3,5	100	18.62	SF	2.69	6.07	131	6
9:10	8.09	4.0	100	18.61	58	2.68	6.06	131	(
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ana Watar Di	Name of the second		Saldi Congression		
irge water Disposal	Method Drum	Comments (e.g. colo	r, odor): <u>NO</u>	<u>co(n</u> , 10	
SAMPLE COLLE	CCTION: Method:	Pens+. Pu	<u>-ç</u> :	Sample Time:	19:15
					te in a said mana ave
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
GW HALL	JARD-3	EHI	2-11 glow	166	8270 c EAI
		AND THE RESERVE OF THE PERSON			
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¹ well volum	nes for various diameters i	n gal /ft			1
	0.75" = 0.023 3.00" = 0.32		25" = 0.064 1. $00" = 0.65$ 6.	50" = 0.09 00" = 1.47	
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HRS Reference #65

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Monthener	, VI 03002	OUA						70	12014
			l Water Monit			and the state of t	Well ID: <u>^</u> ^	W-3	<u>}</u>
		JARD			Project #: <u>3</u>				
					Date: 4-4			G. 16	Afrika •
Weather Co	onditions:	Su 8	10°F		<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>		Time on Site:	٦; کر	
1. WATER	R LEVEL D	ATA: (from TO	C)			n taliga ang atawa Kabupatèn kabupatèn		antakan kep	drol wet
Description	n of measurir	ng point (MP)	Top of	8VC	Dept	h to water belo	w MP (ft):	7.58 (1	12.0
Total well	depth (ft):	12.27	Well I	Dia.(in): <u>Z.</u>	O Leng	gth of water col	umn in well (1	t): 2.6	૧
Gallons pe	r foot ¹ :	0.16	Well v	olume (gal):	0.4				
2. PURGIN	G DATA: M	ethod: P	enst. P	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Sta	bilized intake	lepth: 「し.	<u>O</u>	
		well volum							min)
Parameter	equipment:	YSI, turbidir	neter	(3 w	此10(=	4.9 L)		otraja vili. Tara aras	
ne	Depth	volume	Flow Rate	Temp	Spec Cond.	Dissolved	p.H. (Std)	ORP	Turb.
	(ft.)	removed (liters)	(mL/min)	(°C)	(uS/cm) @25°C	Oxygen (mg/L)	p,11. (0.0)	(mV)	(NTU)
750	7.58	0	0	stat		sant a a s			
o; d 5	9.60		200 No	pana	ult	- due	to pro	duct	nes
5710	9.60	2	200		Asset A	14.74		and the state of t	
5:15	9,60	3	200	2.43		sit by the	والميمون والمنطق والمستون والمنطق والمنط والمنط والمنط والمنط والمنطق والمنط والمنط والمنط والمنط والمنط والمن	angelister.	
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	ruige water Disposa	l Method <u>Oru</u>	Comments (e.g. o	color, odor): oil glo	des in a	- Te
;	3. SAMPLE COLLI	ECTION: Method:	Penst. P)	ımple Time:	10:27
	Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
	GW	JAKD-3	EAI	1- IL gime 1 (N200 ml) god	100	8270 CA 8082 EA 1668A
ŧ	DT	JARD-3	EAI	2-16 Adm	= 1 u	8270c EA
	lwell volun	nes for various diameters	in gal./ft.	91-		
	0.50" = 0.0 2.00" = 0.1		1.00" = 0.041 3.50" = 0.50		0" = 0.09 0" = 1.47	
	Comments: 5	well volu	es punge	d (as per D	PB/hf	on sagl
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	P.\STANDARD\JCO Form	ns\MW GW sample form.doc		Tit	ne Off Site_	10:35

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Monthener, v I 03002 CSA	WWW Ontooneorton
Ground Water Monitoring Wel	waith, MWC29
Project Name: TARD	Project #: 3-2218-3 Well 10.
Site Location: Bemytar UT	Date: 4-2-10
Weather Conditions: 5 cm 750 F	Time on Site: 8:05
1. WATER LEVEL DATA: (from TOC) Description of measuring point (MP) Top of fuc	Depth to water below MP (ft): 10-5 8
Total well depth (ft): 3 (30 Well Dia.(in):	2.0 Length of water column in well (ft): 20.72
Gallons per foot! D.16 Well volume (ga	n: 3.3
2. PURGING DATA: Method: Penst. Py	Stabilized intake depth: 29.0
Purge Volume @ 1 well volumes: 17,5	(liters) Purge Rate:(ml/min)
Parameter equipment: VSI turbidimeter	and the state of t

				5.3	4,744 (12.1) 4	under teil der Ein			
Time	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
8:10	10.58	0	0	Stark	s nii ne ja k	min 			visty" i
8.15	10.59	1 .	200	18.73	77	1.62	6.39	~ZS	28
8:20	10.59	2	200	18.52	77	0.69	6.40	-30	23
8:25	10.59	3	200	18.37	77	0.65	6.40	-33	20
8:30	10,59	Ч	200	18.40	76	0.62	6.41	- 38	19
8:35	10.59	S	200	18.39	76	0.60	6.42	- 39	18
9:00	10.59	10	200	18.42	76	0.58	6.42	-40	19
9:05	10.59	LI	200	18.40	26	0.59	6.43	-40	19
9:10	10.59	12	200	18.39	74	0.60	6.43	- 40	18
9:15	10.59	13	200	18.42	76	0.59	6-43	- 40	18
9:20	5-796	۷.							
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Purge Water Dispose		Perist, D	lor, odor): No		rifrijana kirija ka H.
	ECTION: Method:	peusi, v		Sample Time:	1,20
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
> GW	JAPD-3	EAI	2-12 Anta	,e	8270c EH
	1			162-10	
		1/	2-12 Anten	lu	82706
levell sealer	mes for various diameters i	-1/0			12086 / 0
0.50" = 0.0 2.00" = 0.1				50" = 0.09 00" = 1.47	
		i varioni grandi kritistan ili Tandina kara La kalanda di Salah (1917) ili bayasa di			elinnis falmining Vizieli lel
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Comments:	P-1 is Duy 10 1668A c	n mw-31	MW-3D) (ficts hw-3 a	ain time
Comments: D	P-1 is Duy 10 1668A c	n mw-3D	MW-3D) (ficts nw-3 o	ap DPB
Comments: D	P-1 is Duy 10 1668A c	m mw-31	mw-3D) (ficts	cion time
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Comments: D	P-1 is Duy 10 1668A c	m mw-3)	mw-3D) (ficts	cion time
Comments: D	P-1 is Duy 10 1668A c	n mw-3)	mw-3D) (ficts	apa DPB
Comments: D	P-1 is Duy 10 1668A c	n mw-3)	MW-3D) (ficts nw-3 o	cion time
Comments: D	P-1 is Duy 10/1688 c	m mw-3D	mw-3D) (ficts	cion time
Comments: D	P-) is Duy	n mw-3)	MW-3D) (ficts	apa DPB
	10 1668A c	m mw-3)) on r	n w- 3 •	~ ~ DF5
	10 1668A c	n mw-3)) on r	hw-3 o	~ ~ DFB

Phone: (802) 229-4600
Fax: (802) 229-5876

Montpelier	VT 05602	USA	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		· · · · · · · · · · · · · · · · · · ·			johnsonco.	
Project Nar	ne:				ample Collect Project #: <u>'5</u>		Well ID:	<u> </u>	<u>4</u>
Site Location	on: <u>B</u>	ennyta			the second second			orien Geriffen	
		5u~ °	•		11.000		Time on Site:	19:40	<u>) </u>
	F	ATA: (from TO		:					
Line North	Jan Barrier	ng point (MP)	Challeng in the	PVC	Dent	h to water belo	w MP (ft):	5.23	
Total well	denth (ft):	9.95	Well I	is (in): Z					
		0-16						·J·	***************************************
		lethod:				hiliand intolen	iansh. G C		
				-		Rate: C		the state of the state of	-:_X
* *		well volum		<u> </u>	(liters) Purge	e Rate: (C	, <u>C</u>	(m\n	iin)
Parameter	equipment:	YSI, turbidin	neter				44.44.4		
ime	Depth (fl.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
19:45	€.23	0	٥	Start		_			
02:91	8.25	٥,5	100	19.54	2.88		5.92	117	9
19,55	8.25	(.0	100	19.58	2-30	2.30	5.92	107	<u>ر</u> د
20:00	4.25	1.5	100	19.60	63	1.86	5.92	100	ד
20:05	8.25	2.0	100	19.61	62	1.75	5.93	91	ی
20:10	8.25	2.5	0	19.60	62	1.68	5.43	88	6
20:15	825	3.0	100	19.58	61	1.66	5.93	86	6
20:20	8-25	3,5	100	19.57	61	1.65	5.94	85	\$
50:53	8,25	4,0	100	19.59	62	1.65	5.94	85	6
20.27									
							ļ		
						4.2.2.2.4.4444		Ye. Kasaki.	

urge Water Disposa	Method Dru	Comments (e a colo	or, odor): <u>Y\\</u>	do no	ula
SAMPLE COLLI	ECTION: Method:	Servet. Pr	7	Sample Time:_Z	0;2)
					and their committee
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
GW	JARD-3	EAI	2-12 Aube	100	8270C EAT
					tanak nga danangs
7				4.418.144	
¹ well volun	nes for various diameters	in gal./ft.			
0.50" = 0.0 $2.00" = 0.1$	0.75" = 0.023 6 3.00" = 0.32			50" = 0.09 00" = 1.47	
omments:					
				er engelegier er er bei bereit. Bereite	
	erak arak Koronia, nagarahad Koronia	aranta e e a e de M aranta a a a figura a a a a a a a a a a a a a a a a a a			
					ana kadiya barinin a
					
\STANDARD\JCO Form	s\MW GW sample form.doc		T	ime Off Site	20;55
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Page 186 of 244

Montbelle	r, VI U30UZ	USA			~~~ <u>~</u>	-		Jonnsonco.	
n 1 2		Ground JAPD	l Water Moni	ne valence de 194	ample Collecti Project #: <u>3 - 7</u>		Well ID:	nw-	1D
		mytar, V			Date: <u>9-2</u>			a aditiis V ot e	
		Show &					Time on Site:	6.17	
100 / 100 / 100	14 a 4 a 4 a 4 a 4 a 4 a 4 a 4 a 4 a 4 a	ATA: (from TO	se a Espera de Como de						
		ng point (MP)				h to water belo			·
		31.52				th of water col	umn in well (f	1): 21.	1 /
1 1 1 1 1 1	1 1	0.16	^						
2. PURGIN	IG DATA: M	ethod:R	enst. P	<u></u>		bilized intake o	lepth: 25	<u>, o</u>	
Purge Vol	ume @ <u>1</u>	well volum	es: 13.	3	(liters) Purge	Rate:	200	(ml/r	nin)
Parameter	equipment:	YSI, turbidir	meter			Marketta Harristan		the field	
me	Depth	volume	Flow Rate	Temp	Spec Cond.	Dissolved	p.H. (Std)	ORP	Turb.
iiic	(ft.)	removed (liters)	(mL/min)	(°C)	(uS/cm) @25°C	Oxygen (mg/L)	F (3.03)	(mV)	(NTU)
5: 2S	9,55	0	0	Stat	,	,,	_		
:,30	9.55	L	200	19.20	58	1.30	6.12	(23)	9
:35	9.55	2	200	19,07	58	1.20	6.12	118	7
,:40	9.55	3	200	18.99	57	1.12	6.10	116	6
6;45	9.55	4	200	18.99	57	1.10	6.09	114	6
:50	9,55	5	200	1898	57	1.08	6.08	112	S
7:15	9.56	10	२००	18.77	56	1-13	6.05	102	4
7:20	9.56	11	200	18-75	56	1.14	6.05	101	4
7:25	9,56	12	200	18.80	56	1.14	6.05	101	4
7:30	9,56	13	200	18.77	56	1.13	6.05	100	4
7:35	9.56	14	200	18.79	56	1.14	6.04	101	4
7:40	Say	4-2					:		
				Alexander of					
						ed on day.			
									

rge Water Disposa	Method Dru	Comments (e.g. colo	r, odor): No ce	la ro	cdo
SAMPLE COLLI	ECTION: Method:	Penst, Am	,	ample Time:	7:40
	Maring Comments				
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
OW	JARD-3	EAI	2-12 Anha	12e	8270C PAJ
		et en laggerene.		3 ⁽ 4) 11	ere ere eg e eje ever
35%	egerada e estada				
lwell volun	nes for various diameter	s in gal./ft.			
$0.50^{\circ} = 0.0$			25" = 0.064 1,5	i0" = 0.09	
2.00" = 0.1			00" = 0.65 6.0	00" = 1.47	
				e lander	
			d Salaman		
mments:					
	A second			* *	
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Montbener	, V L U3UUZ	USA					***************************************	On the original or the original original original original or the original original original original original original origin	
				toring Well S	ample Collect	on Record 2218-3	Well ID:^	1W-6	2_
	ne: <u>Tr</u>	KD		—	Project #: _ <u>> -</u>	6218-3			
Site Location	on:	envirgh			Date: 9-1.	-10		ininini On markin	
Weather Co	onditions:	Sw	70 1				Time on Site:_	<u> ५:५></u>	
and the first state of	A London Bridge	ATA: (from TO	はったいしょうし		Amerika di Sara Aray Magdalah	nika masa ka		nganing Nabagangsa	Property of the property of th
Description	of measurin	g point (MP)	Top of	470 ح	Dept	h to water belo	w MP (ft):	11.92	
Total well	depth (ft):	14.3	Well I	Dia_(in):2_	_OLeng	th of water col	umn in well (f): <u> </u>	8
		0.16		4	and the second second second				
		ethod: R							
Purge Volu	ıme @1_	well volum	es:	44	(liters) Purge	Rate: 2	೦೦	(ml/n	nin)
		YSI, turbidir							
ne	Depth	volume	Flow Rate	Temp	Spec Cond.	Dissolved	p.H. (Std)	ORP	Turb.
	(ft.)	removed (liters)	(mL/min)	(°C)	(uS/cm) @25°C	Oxygen (mg/L)		(mV)	(NTU)
:.05	11.92	0	0	Ster			.) · · · ·	N. jan	wally all
5:10	11.92	1	200	16-74	105	2.08	6.11	-32	13
5:15	11.92	2	200	16.62	103	1.57	6-08	-51	9
5.20	11.92	3	200	(6.58	101	1.22	6.06	-65	7
5:25	11.92	4	200	16,53	100	1.15	6.05	-68	6
5:30	11,92	5	200	16.51	lon	1.14	6.05	-69	6
5:35	(1.92	(_p	200	16.52	99	1.14	6-04	-70	5
5;40	1192	٦	200	16.50	99	1.13	6.04	-70	5
S:4S	Soul	لعا							
	U								
	}					<u> </u>			
						a unu esser		e e fui u	
· · · · · · · · · · · · · · · · · · ·	+		<u> </u>	+				1	1

	Purge Water Disposa	I Method Dru	Comments (e.g. colo	or, odor): NO Co	10 no 01	<u> </u>
3	3. SAMPLE COLLI	ECTION: Method:	Perst. B.	·C	Sample Time:	(5:45
	Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
	0 W	JAAD-3	EAT	2-16 Aubr	; ાવ	8270c/ E
l	GW	L	L	Mar V	7	1
		en e			i seren	1 1 1 1 1 1 1 1 1
	¹ well volun	nes for various diamete	rs in gal./ft.			
	0.50" = 0.0 2.00" = 0.1	0.75" = 0.023	1.00" = 0.041 1		50" = 0.09 00" = 1.47	
(Comments:	DP-1 is d	lylicale #	2) of m.	w - 6.	Fiction
				-/ 0 	Q 3 (- Face 140
		er er en engelenden den som e. Som formere en er er			والأعراق والشاري والأساسات	
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100 State S	NSON COM Street, Suite r, VT 05602						Fax:	(802) 229-4 (802) 229-5 johnsonco.	5876
No. 199		· 1908年 - 1904年 - 1908年 - 190	l Water Monit	toring Well S	ample Collect	ion Record -2218-3	Well ID: N	1W-(60
	me:		and the second second second		Project #:	-2218-3			
Site Locati	on: <u> </u>	enningten	<u>, V C</u>		Date: 9-1	-10		i girin b	
Weather Co	onditions:	Su- 9	SOF			·	Time on Site:_	11:3	0
and the second of	Marie de la Company	ATA: (from TO	ales Articles (1997)			en fraktisteringen. Nodelstering			
Description	n of measurir	ng point (MP)	Top of	(VC C	Dept_	h to water belo	w MP (ft):	12.33	
Total well	depth (ft):	33.72	Well I	Dia.(in): Z	_O Leng	th of water colu	umn in well (f): <u>2(.3</u>	9
Gallons pe	r foot ¹ :	0.16	Well v	/olume (gal):_	3,4				
2. PURGIN	IG DATA: M	ethod:	Perot A	<u></u>	Sta	bilized intake d	lepth: 31.	<u>S</u>	
Purge Vol	ume @1_	well volum	es: 12()	(liters) Purge	e Rate:	200	(ml/r	nin)
	. – .	YSI, turbidir					1 4 () 5 ()		
me	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
6:35	12.33	0	Ø	State		~		7234	vai 🗂
6:40	12.34	(200	13.9(66	1.56	6.24	36	40
6:45	12.34	2	೮೦೮	13.92	66	1.42	6.20	33	36.
6.50	12.34	3	206	13.88	(, t	1.21	6.19	3\	32
6288	12.34	Ч	200	13.82	66	1.02	6.17	28	30
(),00	12.34	5	200	13.76	ماما	0.96	6.17	26	35
(7:05	12.34	6	200	13,69	66	0,90	6.16	24	31
17:10	12.34	າ	260	13.70	66	0.85	6.16	2	30
17:15	12.34	૪	200	13.65	66	0.80	6-15	20	32
17.20	12.34	9	٥٥٥	13,62	\$\r\c	0.79	6.15	19	33
17:25	(2.34	10	200	13.59	66	0.79	4.14	18	ું કુ
17:30	12.34	11	200	13.62	1	0.80	614	17	31

13.60

13.61

200

200

66

64

0.51

0.80

12.34

(2.3 Y

12

13

17:35

17:40

17:45

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3 1

Qty/type method/Lab C2-1L Galax 1 @ G279c EAT Well volumes for various diameters in gal./ft. 0.50" = 0.01 0.75" = 0.023 1.00" = 0.041 1.25" = 0.064 1.50" = 0.09 2.00" = 0.16 3.00" = 0.32 3.50" = 0.50 4.00" = 0.65 6.00" = 1.47 Omments:	orge Water Disposal	Method Orw	Comments (e.g. color,	odor): slightly	turid	nu da
Sample Matrix Chain-of-Custody# Shipper ID# Container Qty/type Preservation Analytical method/Lab (5 W JAP-0-3 EN J 2-IU Glove 1 @ \$2.70 c EA J well volumes for various diameters in gal/ft. 0.50°=0.01 0.75°=0.023 1.00°=0.041 1.25°=0.064 1.50°=0.09 2.00°=0.16 3.00°=0.32 3.50°=0.50 4.00°=0.65 6.00°=1.47 Comments:	SAMPLE COLLE	CCTION: Method:	Point Pr	<u> </u>	ample Time:	17:45
Qty/type method/Lab C27°c EAT Z-IL Glina I & S27°c EAT		e elettal				
well volumes for various diameters in gal/ft. 0.50" = 0.01	Sample Matrix	Chain-of-Custody#	Shipper ID#	- +		
well volumes for various diameters in gal./ft. 0.50" = 0.01	GW	JALD-3	EAI	2-16 Andre	16	8270 C EAI
well volumes for various diameters in gal./ft. 0.50" = 0.01			5 S S S S			
0.50" = 0.01					1 4414	
2.00" = 0.16 3.00" = 0.32 3.50" = 0.50 4.00" = 0.65 6.00" = 1.47 Comments: PASTANDARDUCO FormsIMW GW sample form.doc Time Off Site 48-00	¹ well volum	nes for various diameters	in gal./ft.	i Palanin ing palas		
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Monthener	, 71 03002	Con	3 337-4 3 # *4	! XV/-14 C	Is Callast	Decemb			
		计通讯 网络大红 人士	ı water Monti		ample Collecti Project #: <u>3</u>		Well ID:	<u>nw-</u>	7
		ARD		and the second second		the second secon			
		emyte,			Date: <u> </u>				
Weather Co	onditions:	clear, 6	50° (-			<u> </u>	Time on Site:	6:10	
19,459,653,453		ATA: (from TO		0 (-					
Description	of measurin	ng point (MP)	1200Fl	3 V C	Dept	h to water belo	w MP (ft):	۱, ۲۹	
Total well	depth (ft):	1398	Well I	Dia.(in): <u>Z</u>	- C) Leng	th of water colo	umn in well (f	1): 9.10	<u>L</u>
		0.16			1.1				
2. PURGIN	G DATA: M	ethod: Pe	2- + cm		Sta	bilized intake o	lepth: <u></u>	0	
Purge Volu	ıme @ <u> 1 </u>	well volum	es: <u>S. (</u>	•	(liters) Purge	Rate: 2	00	(ml/n	nin)
Parameter	equipment:	YSI, turbidir	meter			150A - 100 Y			
ìme	Depth	volume	Flow Rate	Temp	Spec Cond.	Dissolved	p.H. (Std)	ORP	Turb.
line	(ft.)	removed (liters)	(mL/min)	(°C)	(uS/cm) @25°C	Oxygen (mg/L)	p.11. (Sid)	(mV)	(NTU)
6:15	4.79	0	0	Start				1,45444	
, . 70	4.79	J.	200 +8,1 400	18.11	63	3.85	7.46	125	50
6:25	4.)9	2	700	17,90	62	4.00 63	9.6.50	128	4
1,.30	4.79	3	500	17.88	62	4 17	6-40	131	3
6:35	4.79	4	200	17.86	b2	4.24	6.35	133	3
6:40	4.79	ς	20 <i>0</i>	17,90	61	4.26	6.34	134	2
6:45	4.79	6	San	17-92	61	4.28	6.32	134	2
6:50	4,79	7	200	17.89	61	4.28	6.32	134	2
6:55	4.79	8	200	17.90	62	4.29	6.31	133	2
7:00	50-5	لبا							
		:							
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						·			
								42.000	
						e Portugue de la suspe	The section	11 11.	
	1	T	1	7	1	<u> </u>	T	T	

	ustody# Si s diameters in gal./fr = 0.023 1.00	hipper ID# A ft. 0" = 0.041	Container Qty/type 2- L Gi-	2 14	Analytical method/Lab 8210C ROSL/CB/EA
"well volumes for various 0.50" = 0.01	s diameters in gal./fr = 0.023 1.00	A	Qty/type 2-1L A-L G1- 1.25" = 0.064 4.00" = 0.65	1.50" = 0.09	method/Lab 8210C ROBLICES EA
"well volumes for various 0.50" = 0.01	s diameters in gal./fr = 0.023 1.00	ft.)" = 0.041	1.25" = 0.064 4.00" = 0.65	1.50" = 0.09	
0.50" = 0.01 0.75" 2.00" = 0.16 3.00"	s diameters in gal./f	ft. D" = 0.041	4.00" = 0.65		
0.50" = 0.01 0.75" 2.00" = 0.16 3.00"	" = 0.023 1.00	0" = 0.041	4.00" = 0.65		
0.50" = 0.01 0.75" 2.00" = 0.16 3.00"	" = 0.023 1.00	0" = 0.041	4.00" = 0.65		
			4.00" = 0.65		
	" = 0.32 3.50		4.00" = 0.65		
mments:					
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					李花春 医海流
				taria da kaban da kangatan kanalah kabupatan kalangan kanga bangan bangan bangan bangan bangga bang bang	Santa Arabada a Santa Santa Santa
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Project Na	me: <u> </u>	Jacks of the State of	l Water Monit	oring well s	Project #: 3	ion Record	Well ID:	1W-8	
		connecta			Date:				
the second secon	and the second second	Sur E	· ·	a e e e e e e e e e e e e e e e e e e e		and the second second	Time on Site:	9.30	ט
		ATA: (from TO							
				PI/C	Deni	h to water belo	w NAD (A).	5.85	
		12-57							
						gui of water con	шш ш жы (з	·) <u> </u>	
		<u> ۱.۱.۷</u> ethod:					(1.7	ა ე	
	Service of the servic						The state of the s	and the second second	
		well volum	And the second		(liters) Purg	e Rate:		(ml/n	nin)
Parameter	equipment:	YSI, turbidii	neter						
ime	Depth (fl.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
1;40	5.85	0	0	Start	_				
1:45	5.87	1	750	18.96	85	1.99	6.54	~(3	130
1550	5.87	2	200	18.95	1	1.92	6.30	32	85
3:25	5.87	3	200	18.98	75	1.84	6.28	34	42
10:00	5.87	4	200	18,99	74	1.80	6.27	37	40
0:05	5-87	5	200	18.97	74	1.79	6.27	40	44
0110	5.87	6	200	19.00	74	1.78	6.26	40	42
10215	6.87	7	200	19.01	74	1.79	6126	39	43
05:20	Sent	el	1.0000000000000000000000000000000000000				. 1.		

			r					TENERAL SECTION	
							a Tarkanian		LIERAL &
		1							

化二氯甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	- 2218-3				Nakanakanakana
roject Number: 3	-3219-3 - Well	Name: MU-8	Date: 9-1-	10 Sampler's	Intitials:
arge Water Disposal	Method Dr w	Comments (e.g. colo	r, odor):_ <u>المر</u>	n tembrel	no aga
		Perst. Pr			10:20
SAMPLE COLLE	ECTION: Method:	rewit. jo		Sample Time:	10,20
Section of Association Association					
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container	Preservation	Analytical
			Qty/type		method/Lab
6 W	JARD-Z	EAI	ZIL glass	Ice	8270c/EAT
			1		
			1		
^l well volun	nes for various diameters	in gal./ft.			. Je objeka kasprija
0.50" = 0.0		1.00" = 0.041 1.		50" = 0.09	
2.00" = 0.1	6 3.00" = 0.32	3.50" = 0.50 4.	00" = 0.65 6.	00" = 1.47	
		arva kazego kantarina. Basa Xelak kantarina k			
omments:					
				transista da la companya da la comp La companya da la co	
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\STANDARD\JCO Form	s\MW GW sample form.doc		T	ime Off Site	10:35
				OII ORG	· · · · · · · · · · · · · · · · · · ·
					er en gerigelijke in de komen van de de komen. De generalijke in de komen van de de komen van de de komen van de de komen van de komen van de komen van de ko

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(A.) removed (liters) (mL/min) (°C) (uS/cm) Oxygen (myL) (mV) (NTU) 3:25 4.19 0 0 5+wt	Montpelier	, VI 05602	USA				- D 1		onnaonco.	
Site Location: Serving Serving Site Location: Serving Site Location: Serving Site Serving Site Location: Serving Serving Site Location: Serving Site Location: Serving Site Location: Serving Serving Site Location: Serving Serving Site Location: Serving								Well ID: <u>اً ا</u>	w-9	
Weather Conditions:	Project Nar			and the second second			2218-3			
NATER LEVEL DATA: (from TOC) Description of measuring point (MP) Tep et f v C Depth to water below MP (ft): 4.69						Date: 9-1-	医基础性坏疽病病			
Description of measuring point (MP) Top et (v C Depth to water below MP (R): 4.69	Weather Co	onditions:	clean	60°F				Time on Site:_	P:12	
Total well depth (fi):										
Total well depth (fi):	Description	n of measurin	g point (MP)	Top of	1vc	Dept	h to water belo	w MP (ft):	1.69	<u> </u>
2 PURCING DATA: Method: Pent Prog Stabilized intake depth: (0.0 Purge Volume 1 well volumes: 4.3 (liters) Purge Rate: 200 (ml/min) Parameter equipment: YSI, turbidimeter time Depth (ft.) volume removed (liters) 1 200 14,99 77 1,57	Total well	depth (ft):	11.73	Well I	ازی (in): <u>2</u>	. C Leng	th of water col	umn in well (fl): <u>7.</u> C	4
2 PURCING DATA: Method: Pent Prop Stabilized intake depth: 10.0 Purge Volume 1 well volumes: 4.3 (liters) Purge Rate: 200 (ml/min) Parameter equipment: YSI, turbidimeter time Depth (ft.) volume removed (liters) (mL/min) (°C) (sizer) (mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/m	Gallons pe	r foot ^l :	0.16	Well v	volume (gal):_	(.13				
Purge Volume @ 1 well volumes: 4.3 (liters) Purge Rate: 200 (ml/min) Parameter equipment: YSL turbidimeter Ime Depth (A.) volume removed (liters) (mL/min) (°C) Spec Cond. (uS/cm) (mg/L) (mV) (NTU) Size U. U. 0 0 0 5+wt							bilized intake o	lepth: 10 .	0	
Parameter equipment: YSI, tarbidimeter ime Depth (ft.) volume removed (ft.) Flow Rate removed (ft.) Flow Rate (ft.) Temp (ft.) Dissolved (ft.)				41.1	•			tana National April 19		nin)
Depth volume (ft.) removed (mL/min) (°C) (ws/cm) (e afrika								
Depth removed (nL/min) 1 emp 1 emp 25°C 200 25°C 200 200 25°C 200		1		NAME OF	A 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
((liters) ((lite	Time						'*'	p.H. (Std)		1
1.30 4.71 1 200 16.99 77 1.57 6.06 3 8 45 1.35 4.71 2 200 16.65 77 1.48 6.06 3 948 1.40 4.72 3 200 17.02 76 1.70 6.07 37 60 1.34 4.72 4 200 16.90 76 1.74 6.08 35 42 1.35 4.72 6 200 16.86 76 1.78 6.09 36 44 1.00 4.72 7 200 16.92 76 1.79 6.10 35 43 1.05 4.72 8 200 16.88 76 1.78 6.09 35 44 1.05 4.72 8 200 16.88 76 1.78 6.09 35 44 1.05 4.72 8 200 16.88 76 1.78 6.09 35 44			(liters)	(11112/111111)		@25°C	(mg/L)			
2 200 16.65 77 1.48 6.06 36 P48 1:40 4.72 3 200 17.02 76 1.70 6.07 37 60 1:45 4.72 4 200 16.90 76 1.74 6.08 35 42 1:55 4.72 5 200 16.86 76 1.78 6.09 36 44 1:00 4.72 7 200 16.92 76 1.79 6.10 35 43 1:05 4.72 8 200 16.88 76 1.78 6.09 35 44 1:05 4.72 8 200 16.88 76 1.78 6.09 35 44 1:05 4.72 8 200 16.88 76 1.78 6.09 35 44 1:00 300 4.72 8 200 16.88 76 1.78 6.09 35 44	6:25	P).69	0	0		-				16 T
6:40 4.72 3 200 17.02 76 1.70 6.07 37 60 6:45 4.72 4 200 16.90 76 1.74 6.08 35 42 6:50 4.72 5 200 16.86 76 7.77 6.09 34 40 6:55 4.72 6 200 16.89 76 1.78 6.09 36 44 7:00 4.72 7 200 16.92 76 1.79 6.10 35 43 7:05 4.72 8 200 16.88 76 1.78 6.09 35 44 7:00 5 4.72 8 200 16.88 76 1.78 6.09 35 44	6:30	4.71	•	200	16.99		1.57	6.06		
6;45 4.72 4 .200 16.90 76 1.74 6.08 35 42 6;50 4.72 5 200 16.86 76 1.77 6.09 34 40 6:55 4.72 6 200 16.89 76 1.78 6.09 36 44 7:00 4.72 7 200 16.92 76 1.79 6.10 35 43 7:05 4.72 8 200 16.88 76 1.78 6.09 35 44 7:10 sampled	6:35	4.71	2	200	26.65		1.48	6.06	<u>35</u>	7
6:50 4.72 5 200 16.86 76 1.77 6.09 34 40 6:55 4.72 6 200 16.89 76 1.78 6.09 36 44 7:00 4.72 7 200 16.92 76 1.79 6.10 35 43 7:05 4.72 8 200 16.88 76 1.78 6.09 35 44 7:10 5-4-1	1:40	4.72	3	200	17.02	76	1.70	6.07	37	60
6:55 4.72 6 200 16.89 76 1.78 6.09 36 44 7:00 4.72 7 200 16.92 76 1.79 6.10 35 43 7:05 4.72 8 200 16.88 76 1.78 6.09 35 44 7:00 5-4 d	10,45	4.72	Ч	· 200	16.90	76	1.74	6.08	35	42
7;00 4.72 7 200 16.92 76 1.79 6.10 35 43 7;05 4.72 8 200 16.88 76 1.78 6.09 35 44 7;00 5-4-4	6,50	4.72	5	200	16.86	76	1.77	6.09	34	40
7:00 4.72 7 200 16.92 76 1.79 6.10 35 43 7:05 4.72 8 200 16.88 76 1.78 6.09 35 44 7:00 sampled	6:55	4.72	6	200	16.89	76	1.78	6-09	36	44
7:10 5-4-3	7;00	The second second second	7	200	16.92	76	1.79	6.10	32	43
	7:05	4.72	8	200	16.88	76	1.78	6.09	35	44
	7;10	Same	La d							
	42.0							2.55		
	AND STREET									

Purge Water Disposa	al Method <u>Drw</u>	orie de la Comm ■ Comm	mento (e.a. col-	ne odorby /M	6.11	Ct. Rue.	_/	_ 0
dige water Dispose	in inserting News		_	or, odor):_ <i>[N</i>	+2	wid		000
. SAMPLE COLL	ECTION: Method:_	Per	, t. Pyp		San	nple Time:	7:10	
Sample Matrix	Chain-of-Custody#	‡ Ship	oper ID#	Containe Qty/type		Preservation	Analy metho	
6W	JARD-2	- EA	エ	2-11 AN	as	الو	82700	EAT
	·				·			
	ent to the second of the					en e		
¹ well volu	mes for various diame	eters in gal./ft.						
0.50" = 0.0 2.00" = 0.1	0.75" = 0.02	23 1.00" =	= 0.041 1.	.25" = 0.064 .00" = 0.65		? = 0.09 ! = 1.47		
No special control or consistent								
						listrikur († 18. júlísa – 18. júlísa († 1885)		
			and the first services and the second		and a second	According to the contract of t	Arra Carraga Santa	
Comments:	1 crange	سان ۱ ر	ساس ان	, wite	-/1	whid	all Du	
Comments:	1) oranje	b L ch	- Lo iv	, wte	$-/\tau$	wbild	all pu	<u>~g.a</u> .
Comments;	1) oranje	b ch	- Lo ii	, wte	<u>-/τ</u>	wbid	all pu	<u>-9-e .</u>
Comments:	1) oranje	> L chu	- Lo ii	, wte	<u>-/τ</u>	wbid.	all pu	-3· .
Comments:	1) oranje	> cm	- L- ii	, wte	-/τ	wbid	all pu	<u>-3-e .</u>
Comments:	1) cranju	> L ch	- L- 12 C0-3	, wte	-/τ	wbid	all pu	-3-e.
Comments:	1) cranju	> cm	- L- 12 C0-3	, wte	-/τ	w-bid	all pu	-3.e.
Comments:	1 cranju	> cm	- L- 12 C0-3	, wte	-/τ	w-bid	all pu	
Comments:	1 cranji	b chu	- 12 (i) C 0-3	, water	-/τ	wbi'd	all pu	
Comments:	1 cranju	b chu	- L- iù C 0-3	, w.J.	-/τ 	wbi'd	all pu	
Comments:	1 cranju	b chu	- L- iv	, woten	-/T	w-bid	all pu	
Comments:	1 cranju	b chu	- L- 12 C 0-3	, w3-	-/τ	w-bid	all pu	
Comments:	1 cray.	b chu	- L- 12 C 0-3		-/τ	w-bid	all pu	
Comments:	1 cray.	b chu	- L- 12 C 0-3		-/T	w-bid	all pu	
Comments:	1 cranju	b ch	- L- 12 C 0-3		-/T	w-bid	all pu	
			- L. ii					
			- L- iv			e Off Site		
Comments: P:\STANDARD\UCO Form			- L- 12 C 0-3					

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	iter Monitoring Well	l Sample Collection Record	Well ID: MW-9D
Project Name: JARD		Project #: 3-2218-3	
Site Location: Benn		Date: 9-1-10	
Weather Conditions: 5w 70	OF		Time on Site: 7:30
1. WATER LEVEL DATA: (from TOC)			
Description of measuring point (MP) To	p of CVC	Depth to water bel	ow MP (ft): 5.14
Total well depth (ft): 24.29			olumn in well (ft): 21.15
Gallons per foot ¹ : Ø.1 U	Well volume (gal): 3.3 %	
2. PURGING DATA: Method: Pe	ust Pung	Stabilized intake	depth: 24.0
Purge Volume @ 1 well volumes:_	12.8	(liters) Purge Rate:	<u> 200 (ml/min)</u>
Parameter equipment: YSI, turbidimeter			

			[65] Fall (1945)	Park A	De Well, 19			1.14	
Time	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
7:40	5.14	0	0	stat	1	-		Teater	
7:45	5.17	l	700	16.72	87	0.95	6,19	7	36
7:50	5.17	2	700	16.84	87	0.78	6.19	2.9	34
フ> 55	5.17	3	200	16.88	87	0.71	6.20	0.3	32
8:00	5.17	4	200	16,74	87	0.60	6-19	-5	34
8:05	5.17	S	Zoo	16.88	87	0.59	6.20	-6	30
8:(0	5,17	6	200	16.90	87	0.58	6.20	-8	24
8:15	5.17	7	200	16.79	87	0,56	6,20	-8	28
8:20	5.17	8	200	16.82	87	0-57	6,19	-7	22
8.25	5.17	9	200	16_72	86	0.56	6-19	-8	ZS
8:30	5.17	10	200	16.70	86	0.55	6.18	- 8	27
8:35	5.17	11	200	16.73	86	0.54	6.18	-9	26
8:40	5.17		200	16.69	84	0.55	6.19	- 9	52
8:45	5,17	13	200	16.72	86	0.54	6.19	-8	27
8:50	Somple	7							
	· · · ·						e, dřá v řezne ne ved		
:									

roject Number:	5-22 8-3 Wel	I Name: <u> </u>	9-1-1 Date: 8-	Sampler's	Intitials: UM
		Comments (e.g. color			
		Perist Pip	<u>) </u>	Sample Time:	<u>η: ξυ</u>
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
6W	JARD-Z	EAI	2-16 Aube	ice	BETOL EAT
^l well volur	nes for various diameters	in gal./ft.			
0.50" = 0.0 2.00" = 0.1	0.75" = 0.023 6 3.00" = 0.32		25" = 0.064 1 00" = 0.65 6.	50" = 0.09 00" = 1.47	
omments:					
STANDARD\JCO Form	ns\MW GW sample form.doc		7	ime Off Site	<u>4:10</u>

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	, , , , , , , , , , , , , , , , , , ,								
Designe Non	ne:		l Water Monit	oring Well S	ample Collecti	on Record	Well ID:	1W-1C	7
	and the second	enningta,	V4 .		Date: 📈	30-10			
		SW					Time on Site:	15:30	. 1 * 4 *
		ATA: (from TO	4				, , , , , , , , , , , , , , , , , , ,		
		g point (MP)		PNC	Navy je	h to water helo	w MD (A)	7-66	
	, especially a fill of the	(0.84				and the second second	rutu talah lahir		7
						un of water con	umn in well (i	i): <u> </u>	<u> </u>
and the second second	and the second s	ethod:						·	
				•		and the second		A Company of the	
		well volum			(liters) Purge	Rate:	200	(ml/n	ıin)
Parameter	equipment:	YSI, turbidir	neter	5 A					
ime	Depth (fl.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
5;35	٤٠ ، ١	0	в	stud		-		<u> </u>	es T
5-140	2.75	١	20 u	19.39	140	1.38	6.76	- 79	9
5745	2.74	2	260	19.59	141	1.01	6.70	-82	.(.)
5:50	2.15	3	200	19.57	143	0.87	6.70	-87	8
5:55	2.75	4	200	19.66	143	0.76	6.72	-94	9
16:00	2.75	5	200	19.56	139	0.73	6.70	-95	9
16:05	2.75	6	200	19.50	138	0.74	6.68	-94	9
16:10	2.75	7	200	19.52	137	0.73	6.69	-94	G
16:12	Sangl	ed	a consensation						
						ļ			
						:			
	<u> </u>								1.1.1.1
						<u> </u>			
	-		<u> </u>	ļ					

	CCTION: Method:	Comments (e.g. cold	and the second second	ample Time:	
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
6 W	JARD-1	EAT	2-12 Aube	ادو	8270 C EA
			•		
				1,5 2,5 4 2 3	
¹well volun	nes for various diameter	s in gal./ft.		era de la composição de l La composição de la compo	
0.50" = 0.0 $2.00" = 0.10$				50" = 0.09 00" = 1.47	
omments:					
	jurgelija ja aminika kataut Peroje				
				10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
					11.5-
STANDARDUCO Form	s\MW GW sample form.doc			me Off Site	16.50
	The second secon			and the same of the same of the	

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Montpeller	, V 1 U30UZ						W W W.	OHIIZOHCO.	LOIN
			l Water Monit				Well ID:	W-11	
	ne: <u>JA</u>	•			Project #: 3-	4.			
		nngta, V			Date: 8-30	-		. , , > <	€
		Su 8					Time on Site:_	16.5	
and the same		ATA: (from TO		A (A					
and the first of the same	电复数电影 化二十二十二	g point (MP)							
		11.26		for the second	1	th of water col	umn in well (f	i): <u>4,3</u>	
		0.16	_		17				
	1.5	ethod: Pu	the second secon	-	1.0				
Purge Volu	ıme @ <u>1</u>	well volum	es: <u>\$</u> _	مار	(liters) Purge	Rate: 2	<u>.00</u>	(ml/n	nin)
Parameter e	equipment:	YSI, turbidir	neter				1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1	138 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
ime	Depth (ft.)	volume removed	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm)	Dissolved Oxygen	p.H. (Std)	ORP (mV)	Turb. (NTU)
lı • Ko	1.96	(liters)	ა ,	Start	@25°C	(mg/L)			
16:40		-	રિવય	18.18	95	3.00	6.18	81	72
(6;45)	1,97	2		18.16				74	
02,0	1.97	3	200		8:39 896		6.28	27	65 54
6:55	1.97		200	18.22		1.32	6.29	30	28
17:00	1.97	4	200	18,29		1.30	6.27	32	<u>56</u>
7:10	1-97	\ \(\)		18.31	94	1.31	6.26	32	55
	1.97	7	200	18.33	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.32	6.26	33	57
17:15	Can	(, 0		, 0, 3,					_ ا
<u> </u>	3 0								
				**					
21 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			<u> </u>					7 (24 2.25	
								·	
	<u> </u>		1					4	·

	Method Drum	Comments (e.g. col	or, odor): かり C	Now No	0.00
SAMPLE COLLE	CCTION: Method:	Parst. Pr	<u>~</u> /:	Sample Time:	17:17
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
GW	JARD-1	EAT	2- IL Anbe	14	BZTOC PCBROBZ EA
			:	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	
lwell volun	nes for various diameters	in gal./ft.			
0.50" = 0.0 2.00" = 0.1	0.75" = 0.023 3.00" = 0.32			50" = 0.09 00" = 1.47	wat wat da ware great Lilia da Lilia Lilia da wat da w Liwakaka da wat da w
mments:					
					· 建油油 海南市
	and the second seco				
:					
STANDARD\JCO Form	s\MW GW sample form.doc		7	ime Off Site	17:25

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Ground Water Monitoring	g Well Sample Collection Record Well ID: /N W - 12
Project Name: Jard	Project #: 3-2218-3
Site Location: Bennington, Vt	Date: 8-30-10
Weather Conditions: Sum 75° F	Time on Site: 9'.50
1. WATER LEVEL DATA: (from TOC) Description of measuring point (MP) 1.04 5 PVC	Depth to water below MP (ft): \frac{\mathcal{H}}{2} - 3 \frac{\mathcal{S}}{2}
	n): 20 Length of water column in well (ft): 6.77
Gallons per foot! O.16 Well volum	ne (gal): L.O8
2. PURGING DATA: Method: Perist - P-B	Stabilized intake depth: 10.0
Purge Volume @ 1 well volumes: 4 . \	(liters) Purge Rate: ZOO (ml/min)
Parameter equipment: YSI, turbidimeter	

Time	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
9:55	4.35	0	٥	Start		F			HV 3
19:00	4.38	1	200	18.50	242	1.14	6.42	- 23	22
(0:05	4.38	2	200	18.34	270	0.87	6-44	-36	4
10:10	4.38	3	200	18.38	267	0.82	6.44	-39	낙
(3-15	4.38	Ч	200	8.40	262	0.77	6.45	-41	3
10.20	4,38	2	200	18.37	260	0.76	6.44	-41	3
10:25	4.38	Ļ	200	18.35	259	0.77	6.45	-41	3
10:30	4.38	7	200	18.36	259	0.76	6.44	-41	3
10:32	Song	ed						:	
			:						
				<u> </u>					

irge Water Disposa	Method Dr	Comments (e.g. colo	r, odor): <u>160</u> C	0/2 00	odn
· · · · · · · · · · · · · · · · · · ·					e oo taasii ta Ahoo. Ah
SAMPLE COLLI	ECTION: Method:	Penst Ving	s	ample Time:	10:32
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
GW	JARD-1	EAI	2-11 Anton	1ce	PCB/ASTA EAS
					8082 m-8-30-10
	esa, e a e e e e e e e e		Service Seals		
¹well volum	nes for various diameters	s in oal /ft			
$0.50^{\circ} = 0.0$ $2.00^{\circ} = 0.1$	1 0.75" = 0.023	1.00" = 0.041 1.	25" = 0.064 1.5		
Management of the second				Para Eligia agrada Atribiya ()	
		一次多年 (東) (東) (東) - 第四版 (東)			
omments:					
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			Allina a		
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				e foreste registre en el cic	
		:			
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STANDARDUCO Form	is\MW GW sample form.doc		Ti	me Off Site	10:48
				and the second s	

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	T A	Ground たり	d Water Monit	oring Well S	ample Collecti	on Record	Well ID:^	W-13	*.
Project Nar	ne: <u>U A</u>	<u> </u>	· .		Project #:	22182			
Site Location	on: 15en	nengten	C D C		Date: <u>8 - 3</u>				
Weather Co	onditions:	Sun 8	504				Time on Site:	12,50	
4.644.5.46		ATA: (from TO							
A 100 A	and the second second	ng point (MP)					ere er i de la		
2.5		17.49		•		th of water col	umn in well (n): <u> </u>	<u>) 4</u>
		0.16							
2. PURGIN	IG DATA: M	lethod:	eust.	<u>v~~3</u>	Sta	bilized intake	depth: <u>15,</u>	<u>0</u>	.1
Purge Vol	ume @ <u>1</u>	well volum	ies:7.	1	(liters) Purge	Rate: 2	00	(ml/ı	min)
Parameter	equipment:	YSI, turbidi	meter	14.3 14.4 14.1	and the first			Harak Maja	
ime	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
2:55	SiTo	0	0	start		4 5 2 4.4.2			er i S
3.00	5.75	, 1	Z00	16.32	64	2.52	5.85	185	2
3:05	5.76	2	200	16.57	64	2.22	5.83	187	2
3:10	5.76	3	200	16.640	64	2.05	5.82	188	2
(3:(5	5.75	4	200	16.26	64	1.88	5.83	180	1
13.20	5.75	S	کەم	16.09	64	1.84	5.82	189	l
13:25	5.75	le	200	16.15	64	1.82	5.82	190	1
3:30	5,75	ז	200	14.20	64	1.81	5.82	189	1
(3:35	5.75	8	200	16.18	64	1.80	5.82	189	
13:37	Saugh	led							
	<u> </u>								
	a salah sa		\$4 						
								ļ	
								<u> </u>	
						14.0			
		/ L			4	4			

urge Water Disposa	Method Drw	Comments (e.g. color	, odor):_no col	a nod	
SAMPLE COLLI	ECTION: Method:	Perst. Pm	1 <u>()</u> Sa	ample Time:	13/37
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
GW	JARD-1	EAI	2-16 Antin	ابو	8770c / EA
		Assistant			
44					erate antique
lwall volum	nes for various diameter	a in anl /A			
0.50" = 0.0 2.00" = 0.1				0" = 0.09 0" = 1.47	Carrier en proportion y
			i pirabaj		
omments:) sun on u	rell area/c.	wered but	- va-d	up,
			inaidh.		
	e de la composiçõe de la La composiçõe de la compo				
		<u> </u>	·		
	and the second of the second o		Andrew State of		
STANDARDUCO Form	sVMW GW sample form.doc	and the second production of the second produc	Ti	me Off Site	13:55
		The second secon		and the second of the second o	and the contract of the first of the

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Montpelier	, VT 05602	USA					www.	johnsonco.	20m
	ne: <u>J</u> A	Ground	d Water Monid		ample Collecti Project #: <u>3 - '</u>		Well ID: E	PA-	3
		menston,	ノ て						
		Sun					Time on Site:	17:35	
* .		ATA: (from TO							
and the second second	The second second	g point (MP)	and and the second of the second	6VC	Dept	h to water belo	w MP (ft): <u>(</u>	20.0	
		15.45							<u>, </u>
	3 A 4 A		Well v	第二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十	The second second second				
	and the second second	ethod:		Aug.		bilized intake	depth: <u> <mark> </mark> .</u>	<u>o</u>	
		well volum							nin)
	• :	YSI, turbidir							
ne	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
.00	1005	0	0	Start		- 	_	Figure	
:05	10,10	,	200	20,01	58	4.92	6-10	143	lo
5'.10	10.11	2	. 200	20.04	Sg	4.63	6-10	148	4
P:15	10.11	7	SOO	20.00	SE	4.50	6.10	152	4
8,50	10,11	4	200	19.98	58	4-45	6.10	ISY	4
8:25	10-11	5	200	19.95	58	4.43	6-10	156	Lf
B:30	10.11	6	Soo	19.97	58	4.42	6.10	157	4
8:35	10.11	7	200	19.98	2 &	4.43	6.10	157	4
8:40	Sayl	و							
	ļ								
								2 2 2 2 2 2 2 2 2 2 2 2 2	
							<u> </u>	ļ	
	<u> </u>								
		1							1

urge Water Disposal	Method Dr	Comments (e.g. colo	ر. odor): ۲۰۵ دها	67 A 0	12
SAMPLE COLLE	CTION: Method:	Peust. Pr	<u> </u>	ample Time:	8:40
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
GW	JARD-2	LAS	2-12 Aulu	LCE	8270C EAT
:					
		ą.u.i.k			
lwell volum	es for various diameters	in gal./ft.			
0.50" = 0.01			25" = 0.064 1.5	በ" = ስ ሰባ	
2.00" = 0.16		3.50" = 0.50 4.	$00" = 0.65 \qquad 6.0$		
				Selection 1	
		. IPA X-31-1	o <i>N</i> /A		
omments:	A stream	out restar	o NA	ه الناء ال	on hy DP
	그 아내 아내는 아니는 아니는 아니다 아니 아니다 아들로	ana an air an an an an 1960. An air an 1960			
					tan tengah jada bermanya da Tida Salah Tida Salah Salah
STANDARDUCO Forms	WW GW sample form.doc		Ti	me Off Site	19:00
STANDARD\CO Forms	VMW GW sample form.doc		Ti	me Off Site_	19:00
STANDARDUCO Forms	VMW GW sample form.doc		Ti	me Off Site	19:00
*\STANDARDUCO Forms	\MW GW sample form.doc		Ti	me Off Site_	Iq. vo

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Project Name: JACD		nitoring Well Sample C Project #	collection Record	Well ID: <u>FPA-4</u>
Site Location: Benni	nota Vr		6.31	
Weather Conditions: Su	n 85°F		· · · · · · · · · · · · · · · · · · ·	Time on Site: 16:40
1. WATER LEVEL DATA:	(from TOC)			andria (ministration) Alteria, la collectió Henrich
Description of measuring point	(MP) Top of	PVC	_Depth to water belo	ow MP (ft): 9.24
Total well depth (ft): <u> </u>	. <u>53 ()</u> Wel	Dia.(in): 2.0	_Length of water co	lumn in well (ft): 5.29
Gallons per foot ¹ :	0.16 Wel	l volume (gal): 0.8 S		
2. PURGING DATA: Method:	Perist	-P-p	Stabilized intake	depth: 13.0
Purge Volume @ 1	vell volumes: 3	. 2 (liters)	Purge Rate:	200 (ml/min)
Parameter equipment:	YSI, turbidimeter			

		11.5 - 11.54	e le spanie e	161 E.S.	ga e estada	Nederle 1907	i i i ja ja ja ja	Myst	
Time	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
i <i>e: 50</i>	9.24		0	stent	40 Jan	a A	12 -	Devices	114 T
16:55	9.24	1.0.	200	19.90	59	5.23	6.19	161	3
מט: רן	9.24	2	200	19.70	59	4.20	6.14	168	2
17:05	9.24	₹	<u> </u>	1991	59	3.80	6.15	168	1
17:10	9.24	4	১৫৩	19.79	54	3.85	6.13	168	W)
17:15	9.24	5	১০৩	19.82	59	3.90	6.12	167	1
くてこれの	9.24	6	200	19.72	59	3.87	6.13	167	
17:25	9-24	7	১০৩	19.76	Sa	3.91	6.13	168	1
17:30	ما ڀيدو	J			:				
					:	:			
			•						
							Freque d		
								1	
	:								
	†				1, 1				
			1		1			.1	

urge Water Disposal	Method Dru-	Comments (e.g. co	nor, odor <i>)</i>		0 0907
SAMPLE COLLE	CTION: Method:	Perst.Pr	9 S	Sample Time:	17:30
					North Charles (1974)
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
GW	JARD-Z	EAI	2-12 Auben	الا	8270C 8082 RB EA-1
j. 4					
¹ well volum	es for various diameter	s in gal./ft.			
0.50" = 0.01 2.00" = 0.16			an an including the area of the contract of th	50" = 0.09 00" = 1.47	
4.77	3.00 -0.32	3.30 - 0.30	4.00 - 0.03	,0° = 1.47	
	Stream by al	restritore	1 well out D	n - h 7	1PB
omments:	Stream both	restoration	/ well cut d	amby?	OPB.
omments:	stream but	restoration	/ well cut d	aby ?)PB.
omments:	strea b -	restoration	/ well cut d	aby?	OPB.
		estraged u			
K-EPA-			11th shear		
K-EPA-	S well d		11th shear	bahn	entadia
K-EPA-	S well d		11th shear	bahn	entadia

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HRS Reference #65

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100 State S	Street, Suite r, VT 05602						Fax:	(802) 229-5 johnsonco.	5876
	me: JA	Groun	d Water Moni		ample Collect Project #: 3	4.0	Well ID:E	PA-1	
Site Locati	on: <u>Be</u> i	naington, L	, f		Date: 8-31	-10	Nasatzak po		4.A
1		Sur 5					Time on Site:	15:30	<u>) </u>
4 44 5 4		ATA: (from TO		ov c	egiteti Dont	h to water belo	w MD (A)	9-38	
Total well	depth (ft):	13.42	Well 1	Dia.(in): Z.	ပ Leng	and the second of the second			<u>.</u>) પ
		0.16							
2. PURGIN	IG DATA: M	ethod:	'eus+,6) wy	Sta	bilized intake	depth: 11.8	<u>} </u>	
Purge Vol	ume @1_	well volun	nes: 7.	45	(liters) Purge	Rate:	200	(ml/r	nin)
Parameter	equipment:	YSI, turbidi	meter			i de la compania de La compania de la co		14 14 14 14 14 14 14 14 14 14 14 14 14 1	
Time	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb (NTI
15:35	9.38	0	6	Stort	a sa i		~ ***	- 10 V16-V1	ţ
। ऽ:५०	9.38	1	200	20.42	63	6-14	6.32	143	4
15:45	9.38	2	200	19.87	63	5.70	6.27	149	3
15:50	9.38	3	٤٥٥	19.89	63	5.68	6.25	151	Z
15:55	9.38	L)	500	19.92	63	5.65	6.24	151	ı
16:00	9.38	5	500	19.90	63	5-64	6.24	152)
		B		•			i	1	

19.88

19.90

200

200

C

7

63

63

5.63

5.64

16:10

16:15

16:05 9.38

9.38

152

151

l

2

Ce.23

6.24

Vell volumes for various diameters in gal/At.	irge Water Disposal	Method Dru	Comments (e.g. co	lor, odor): 🖊 U 🕻	da, n	0000
Sample Matrix Chain-of-Custody# Shipper ID# Container Oty/type Preservation Analytical method/Lab	SAMPLE COLLE	CTION: Method:_	Pent. 1	? <u>~~</u> ,	ample Time:	16:15
Vell volumes for various diameters in gal/ft. 0.50" = 0.01						
well volumes for various diameters in gal/ft. 0.50" = 0.01	Sample Matrix	Chain-of-Custody#	Shipper ID#			
0.50" = 0.01	at CWares	JAPD-Z	EAI	2-11 Aubr	, 14	8270c /EAI
0.50" = 0.01	:					
0.50" = 0.01					1.0	
2.00"=0.16 3.00"=0.32 3.50"=0.50 4.00"=0.65 6.00"=1.47 comments: (1) Shee bol sestencle / well out bon DPR.	¹ well volum	es for various diameters	in gal./ft.			
	omments:	i) stean bal	· restanction	/well and	tby DP	B
STANDARDUCO FormsMW GW sample form.doc Time Off Site 16.23 o						
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Time Off Site 1920	STANDADINICO E	MW GW comple 5 3			ma O# 5'-	11. 3.
	V. ANDARDYCU FUIIIS	иния Ся завіріє (опп.doc			me On Site	19-10
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Phone: (802) 229-4600 Fax: (802) 229-5876

Montpelier, VT 05602 USA		www.johnsonco.con
Ground Water Monitoring W Project Name: エカタン	ell Sample Collection Record Project #: 3.22 (8.3	Well ID: <u>ElA-7</u>
Site Location: Benningto, UT	Date: 8-31-10	
Weather Conditions: 5m 90°F		Time on Site: 14; 20
1. WATER LEVEL DATA: (from TOC) Description of measuring point (MP)	Depth to water bel	ow MP (ft):_ LO. 정정
Total well depth (ft): 13.93 (*) Well Dia.(in):_		
Gallons per foot¹: 0.16 Well volume (g	gal): 0.49	
2. PURGING DATA: Method: Peusl. Pug	Stabilized intake	depth: 12.8
Purge Volume @ 1 well volumes: 1.85	(liters) Purge Rate:	200 (ml/min)

Parameter	equipment:	YSI, turbidir	neter						
Time	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
14:25	10.88	0	0	Stat				199.200	4, T
14:30	10.88	l	200	19.96	61	5.10	6.23	139	Ч
14:35	10.88	2	200	19.90	61	4,93	6.21	134	Z
14:40	10.88	3	200	19.85	61	4.87 wan	6.20	131	2
14:45	10.88	Ч	-200	19.78	61	4.85	6.19	131	2
14:50	10.88	5	200	19.80	61	4.87	6.19	132	1
14:55	10.88	6	200	19.77	61	4.86	6.18	131	1
15:00	(0.88	7	700	19.79	61	4.85	6.18	131	2
15:05	عاجسمع	J	1.1.1.1.1						
	:								
			e e e e e e e e e e e e e e e e e e e		e de la companya de l				*****
		300,000				ne side to religio.	e e na elineir e elegió. E	50/6/37/39/57	
				1					

urge Water Disposal	Method Drum	Comments (e.g. co	lor, odor): <u>no</u>	<u> </u>	<u>990</u>
SAMPLE COLLE	CTION: Method:	Perist. Pu	~	Sample Time:	(5:05
	· · · · · · · · · · · · · · · · · · ·		V	4	
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
GW	JARD-2	EAL	2-12 Amba	10	5270c / 57
			70		8082 CRS
				g _ 274 S 24	
lwell volume	es for various diameters	in col /ft			
0.50" = 0.01			10500064	504 - 0.00	
2.00" = 0.16			1.25" = 0.064 1. 4.00" = 0.65 6.	50" = 0.09 00" = 1.47	
				A. A	
omments: (1)	stream bal	restante	- I will a	ut down	6. DEB
					3 210,
			lander en er er et et en gelee. De lander en en er en geleen		
				a Tananan sa	
				en e	
STANDARDUCO Forms	MW GW sample form.doc		Т	ime Off Site	15:25
			and the second s	:	the state of the s

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4.4	r, VT 05602	the experience of the control of the				Marining Con-	and the second second	johnsonco.	4 1
		Groun	d Water Moni		Sample Collect Project #: <u> </u>		Well ID: <u>E</u>	2A-8	· · · ·
Project Na	me: <u>\</u>	MED		-	Project #:	2018-5			٠
Site Locati	on: <u></u>	enningt	·VT		Date: 8-3	11-10	779 Y 14 15 16 3 3	kindesi Kandasi	<i>2</i> , 1
Weather C	onditions:	Sun 9	o°F				Time on Site:	12:50	
4.3445.65	19.7 A 19.50	ATA: (from TO	and the part of the other	0.40		February Leads			
Description	n of measuri	ng point (MP)	TOPOL	17VC	Dept	h to water belo	w MP (ft):	<u> </u>	
Total well	depth (ft):	9.84	() Well I	Dia.(in):2	.O Leng	th of water col	umn in well (f	t): <u>0·</u>	78
Gallons pe	r foot ¹ :	0.16	Well	volume (gal):_	0.12				
2. PURGIN	IG DATA: M	lethod:	Perst. 6	mg .	Sta	abilized intake (depth: <u>~8. (</u>	<u>,0</u>	
Purge Vol	ume @ <u>1</u>	well volun	nes: <u> </u>	8	(liters) Purge	e Rate: 3-	00-100	(ml/r	nin)
Parameter	equipment:	YSI, turbidi	meter	<u> (</u>	adalah Maratan			Tenanase Tenanase	
me	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Tu (N
3;00	8.06	0	0	5724	e seglionici.	.3/ .5 4	Va ≒ 2 / 2 / 3		

Time	Depth (ft.)	volume removed (liters)	(mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
13:00	8.06	0	0	Stat	e segli di di di	3.25.3	va = t / ji ig	, - , apar	· · · · · · · · · · · · · · · · · · ·
13.05	8.07	1.0	200	19.99	61	7.40	6.12	141	30
13;10	\$,07	1.5	100	19.92	61	6.52	4.12	142	7
13:15	8.07	2.0	100	19.88	61	5.92	6.12	142	5
13:20	8.07	2.5	100	19.85	61	5.61	6.11	142	2_
13:25	8.07	3,0	100	19.87	61	5.49	6.11	142	Ζ
13:30	8.07	3.5	100	19.88	61	5.46	6.11	142	1
(3:35	8.07	4.0	100	19.85	41	5.44	4.10	142	2_
13:40	8.07	4.5	100	19.86	61	5,43	6.10	142	1
13:45	Sungle	0							
							ļ.		
·								F 4 4 5 5 7 4 5 4	* *:
							-		
·									

orge Water Disposa	l Method Drum	Comments (e.g. colo	or, odor): No C	ola no o	<u>dor</u>
	ECTION: Method:	Penst, Am	* * * * * * * * * * * * * * * * * * * *	ample Time:	
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
GW	JARD-2	EAI	2-16 glus	14	8270C FA 8082 PCB FA
			''-		SUAL VEIL
¹ well volum	nes for various diameters	s in gal /ft			
			251 - 0.064	04 - 0.00	
0.50" = 0.0 2.00" = 0.1				0" = 0.09 0" = 1.47	r de grapa grava (1916). De la discussión de la d
omments:	1 too - bank	restoration /	_11 . + 0		PA
municinis: (t	I Silvar Damin	Moralla / (well am on	וט מישע	' 🔼 •
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Phone: (802) 229-4600 Fax: (802) 229-5876

					ample Collecti	on Record	Well ID: <u>E</u>	PA-	9
Project Nar	ne: <u> </u>	HEV			Project #: <u>3 ·</u>	2210 3		1 ") * 1	
Site Location	on: <u> </u>	my tan			Date: 4-1-	10			
		Sum						12:40	<u>) </u>
Description	n of measurin	ATA: (from TOO g point (MP) \	<u> Tap a</u>	6 bro	Dept	h to water belo	w MP (ft):	11.49	
	1 1 1	0.16			1.0				17
	the second secon	ethod:		A second		and the second s	and the first of t		
•	•								
		well volum	Age of the second	in a second of	and the second second	The second second second			
Parameter	equipment:	YSI, turbidir	neter			5444 ×	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
ne	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
2:50	(1490	0	O	no samp	le -		_		0 I
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Sample Matrix Chain-of-Custody# Shipper ID# Container Qty/type Preservation Analytical method/Lab well volumes for various diameters in gal/ft.		
Sample Matrix Chain-of-Custody# Shipper ID# Container Preservation Analytical method/Lab "well volumes for various diameters in gal/ft. 0.50" = 0.01	SAMPLE COLLECTION: Method: Sample Time: Sample Time:	
vell volumes for various diameters in gal/ft. 0.50° = 0.01		y wine in
well volumes for various diameters in gal/ft. 0.50" = 0.01		
well volumes for various diameters in gal/ft. 0.50" = 0.01		ng sa Maryang at K
well volumes for various diameters in gal/ft. 0.50" = 0.01		
0.50" = 0.01 2.00" = 0.16 0.75" = 0.023 1.00" = 0.041 1.25" = 0.064 1.50" = 0.09 2.00" = 0.16 3.00" = 0.32 3.50" = 0.50 4.00" = 0.65 6.00" = 1.47 previor previor		
2.00"=0.16 3.00"=0.32 3.50"=0.50 4.00"=0.65 6.00"=1.47 mments: 1 well plugged @ 11.52 btoc. / 8-12-05 sample Tried to Eish out - weeds/soft. Showed TD. No Sample	¹ well volumes for various diameters in gal./ft.	e destrois popular
mments: (1) well plugged @ 11.52' btoc. /8.12-05 say Tried to Eish and weeds/soft. / Shared 70. (No Sayle)		
mments: (1) well plugged @ 11.52 btoc. / 8.12-05 garp Tried to Eish ant - weeds/soft. / Shared TD. (No Sangle)		
	President de la constant de la const	mon 1
	mments: (1) www grungsed (2) 11.52 btoc. /8-17	102 30-1/21
	No Call Welds/soft. She	med TD-
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	STANDARDUCO Forms\MW GW sample form.doc Time Off Site_\1/2	5:10

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Montheme	, VI 03002							Journsonco.	
Project Na	me: TA	Groun (C)	d Water Moni	toring Well S	ample Collect	ion Record -2718 - 3	Well ID:	PA-	<u>(0</u>
	the second second	ningta				10		na je tadina za	
		Sum	•	e e grandina e se			Time on Site:	13/3	٥
*		ATA: (from TO							
		ng point (MP)	a de la companya 👢 👢	PUC	Dent		w MP (ft)· \		
		17.72							 ን
		0.16	Well	3		Pur		·/	
		lethod:				shilizad intolea	lanth Me	0	
	1 to 1	well volun		•	- 1 Table 1				
•	• 1		*		(inters) Purge	e Rate: 2		(mı/n	ıın)
Parameter	equipment:	YSI, turbidi							
me	Depth (fl.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
3:3S	(0.75	0	0	stat	-	-	. (=
3,40	(0,77	(200	21.67	<i>6</i> 0	3.38	6.05	146	6
3:45	10.77	2_	700	21,40	59	3.20	6.02	152	4
3:50	10.77	}	200	21.00	sη	3.08	6.01	156	4
13:55	10,77	4	200	20.96	92	3.01	6.01	156	3
14:00	10-77	5	200	21.02	Sq	3.00	6.02	157	4
(4:05	10.77	6	200	21.05	59	2.99	6.02	156	3
4:10	10.77	7	200	20.99	82	3.00	6.01	155	4
14:15	10.77	8	200	20.98	258	2-99	6.001	156	4
14:20	Song	Led							
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	9-22/8/ We	II Name: EPA - 1	O Date: 9-1-	O Sampler's	Intitials:
arge Water Disposa	al Method Dru	Comments (e.g. col	or. odor): Lt. brow	- Jornin h	1.00 000
				L	
	ECTION: Method:	Penst, Pm	1	Sample Time:	14;20
			i de la companya de l La companya de la companya de		
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
6 M	JARD-3	EAL	2-12 glas	1 1 : · · · · · · · · · · · · · · · · ·	8270C EAT
<u> </u>				Asses 13	
¹ well volu	mes for various diameter	s in gal./ft.			Ligitary kaominina
0.50" = 0.0 $2.00" = 0.$	0.75" = 0.023 $3.00" = 0.32$	1.00" = 0.041 3.50" = 0.50		50" = 0.09 00" = 1.47	
omments:					
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	ns\MW GW sample form.doe	Sayle		ime Off Site_	14:40
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		Sayle			
		Sayle			

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Project Name: Jaco

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Montpelier, VT 05602 USA		
	Ground Water Monitoring Well Sample Col	lection Record

S SOLC SWell ID: C	TIME OND	
Project #: 3-221 8-3 Well ID:	Palak	-

Site Location: Bennington, VT Date: 8/30/10 Wel

Weather Conditions: hot, survey Time on Site: 1405

1. WATER LEVEL DATA: (from TOC)

Description of measuring point (MP) CO	ncrete rim	Depth to water below MP (ft):	<u>></u>
Total well depth (ft): 6.5		Length of water column in well (ft):	_
Gallons per foot ¹ :	Well volume (gal):		
그리 경기 기를 내용하는 물을 보고 있는 것 같은 것이다.	Q	Stabilized intake depth: Z - S '_	
Purge Volume @ 1 well volumes:	(liters)	Purge Rate: ちゃァ (ml/n	nin)

Parameter equipment: YSI, turbidimeter

Γ				Flow Rate			Vidnyk umen i k	33 44 44		
T	ime	Depth (fl.)	volume removed (liters)	(mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
10	415	2.20	0		16.88	40	8.94		156.5	
f	125		3,0	300	6.53	64	3.92	5.77	184.3	2.04
	430		5.5	500	1648	63	3.68	5.44	1890	3.12
	435		8.5	600	1647	63	3.22	5.72	1000	2.76
1	440		11.0	500	1647	64	2.95	5.67	105.8	1.38
Į.	445		(3.5	500	16.47	64	2.91	5.62	1607	
	1450	7	16.0	500	16.48	64	2.88	5.73	158.6	1.15
	Sein	iple C	1452							
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		i.								

SAMPLE COLLE Sample Matrix	CTION: Method: Chain-of-Custody#		Si	ample Time:	14:52
	Chain-of-Custody#	Shinna-1704			
	Chain-of-Custody#	Chinage III.		141.444.44.44.5	
2,11/2		Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
7.0-	JARD-1	EAI	1012 amber	none	PCB 50 82/4
g.w.	<u> </u>	<u> </u>	ICIL ambd	none	DEHP 8270/
<u> </u>					
¹ well volum	es for various diameters	in gal./ft.		ot Projection. Objektion in	
0.50" = 0.01				0" = 0.09	
2.00" = 0.16	5 3.00" = 0.32	3.50" = 0.50	4.00" = 0.65 6.00	0" = 1.47	
omments:					
				e e e e e e e e e e e e e e e e e e e	
an Bearras d'a d'Abande					
			eg er	and the second s	100
STANDARDUCO Forms	s\MW GW sample form.doc		Tiı	me Off Site	1500

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	and the second second					Well ID:) 도 - 니	
and the second s		\ '	+ 2					
		·			The state of the s		7:20	
	100	100						
CLEVEL DA	ATA: (IFUII TO	Tag 16 -	· Nove	Dent	h to water belov	w MP (fil)	``` 3.40'/~	3.47
l Of Measuriii		Well F	in (in): 1/2	2. Leno	oth of water colu	ımn in well (f	n: 2.1	** **.
	The second secon	the state of the s					77	
C DATA: M	ethod: Pe	ust. Pu	Ø 	Sta	hilized intake d	lenth: 5	3 ′	
ume@ 1	well volum	nes. O	08	(liters) Purge	e Rate:	90	 (ml/n	nin)
	the second secon							
Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU
3.40	0 % (%).	0	stat	e r em ije — 1,21	<u> </u>		7	, : Ì
_0		100 2	0.10	64	7.60	6.56	122	7 0
	0.6	dy		1, 1 <u>2 - 1, 15 - 1</u>				
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1	l	1	1	ľ	1	1	1	1
			<u> </u>	·				
	on:	ne: JARA on: Bevanning onditions: Sw-6 R LEVEL DATA: (from TO n of measuring point (MP) depth (R): S.S' r foot!: O.O! G DATA: Method: Pe ume @ 1 well volume equipment: YSI, turbidi Depth (R.) removed (liters) 3.40 0 - O.S - O.6	ne: JARA on: Benanyt V† onditions: Sur 65° F R LEVEL DATA: (from TOC) n of measuring point (MP) Top of the depth (R): S.S' Well II or foot! O.O! Well volume (R) Well volume (R) Well volume (R) Top of the depth (R): O.O! Depth volume (R) Flow Rate (It.) O.S LOB Z O.S LOB Z O.6 Aug.	ne: JARA on: Benau, Lyt onditions: Sw 65° F R LEVEL DATA: (from TOC) n of measuring point (MP) Top of the depth (ft): S.S' Well Dia.(in): Y; r foot!: O.O! Well volume (gal): IG DATA: Method: Pent. Prof ume @ 1 well volumes: O.O.S equipment: YSI. turbidimeter Depth (ft.) Volume (mL/min) (°C) 3.40 0	ne: JAPA Project #: 3- on: Benning to the Benning point (MP) Top of the Dept depth (R): S.S' Well Dia (in): Yz Lengure (Iters) Purgue equipment: YSI, turbidimeter Depth (R.) removed (Iters) Purgue equipment: YSI, turbidimeter Depth (R.) removed (Iters) Purgue equipment: YSI, turbidimeter Depth volume (R.) removed (Iters) Purgue equipment: YSI, turbidimeter Depth volume (R.) removed (Iters) Purgue equipment: YSI, turbidimeter Depth volume (R.) removed (Iters) Purgue equipment: YSI, turbidimeter Depth volume (R.) removed (Iters) Purgue equipment: YSI, turbidimeter Depth volume (R.) removed (Iters) Purgue equipment: YSI, turbidimeter Depth volume (R.) removed (Iters) Purgue equipment: YSI, turbidimeter Depth volume (R.) removed (Iters) Purgue equipment: YSI, turbidimeter Depth volume (R.) removed (Iters) Purgue equipment: YSI, turbidimeter Depth volume (R.) removed (Iters) Purgue equipment: YSI, turbidimeter	ne: JAP 1 Project #: 3-1218-3 on: Benary to t Date: 8-31-(0) onditions: Sur 65° F RLEVEL DATA: (from TOC) of measuring point (MP) Top of the Depth to water below depth (ft): 5.5′ Well Dia (in): 1/2 Length of water cold to the point of the depth of the point of the depth of the point of the depth of the point of the	The Project #: 3-1218-3 Project #: 3-1218-3 Date: 8-31-(0) Time on Site: 8-100 Time on Si	ne:

rge Water Disposal	Method Dev-	Comments (e.g. colo	ог, odor): <u> </u>	ela, no	010
SAMPLE COLLE	CCTION: Method:	Perst. M	 s	ample Time:	8.00
					sue (energy) sugary a
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
BW	JARD-1	EAI	2-11 Aube	toe	8270C B
				5 Ap. 15	10,72,00
¹ well volum	es for various diameter	s in eal /ft			
0.50" = 0.01	0.75" = 0.023	1.00" = 0.041 1.	たいしょう ことり マー・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	0" = 0.09	
2.00" = 0.16	5 3.00" = 0.32	3.50" = 0.50 4.	.00" = 0.65 6.0	0" = 1.47	
mments:	(1) wable.	to reason ,	w/c in tw	be_	
		la de la la la la la casa.	医抗性乳腺 化二氯甲基磺胺酚	1.0	
		이 눈을 가진 그는 그렇게			
	(2) well a	downed to be	chang m	ultiple	Lins
<u> </u>	2) well a	thoused to be	chang m 8:00 stel	ultiple	Lùs
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	(2) well a to gr	tlound to be	el	ultiple (8)	Jung.
	(2) well of	though to be	chang m (8:00 stal	ultiple	Jung.
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	(2) well a	though to be	8:00 st-l	Ltiple	}
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	E) well a	though to be	Eloy M 8:00 stel	etiple.	
	E) well a	downd to be	8:00 SFel	-ltiple	
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STANDARDUCO Forms		downd to be			

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			d Water Monit	toring Well S	ample Collect	ion Record	Well ID: P	2-05	
Project Nan	ne: <u>J</u> o	nθ			Project #: <u>3 -</u>	- 221 8	W CH 113.		
Site Location	n: Beu	nengta v	<u> </u>		Date: 8-3	1-10	an like i k		
Weather Co	onditions:	Su- 7	5°F				Time on Site:	9:30	
1. WATER	R LEVEL D	ATA: (from TO	C)					17	, ou
Description	ı of measurir	ATA: (from TO	Topot	Tube	Dept	th to water belo	w MP (ft):	2.73/	2-82
Total well	depth (ft):	n 5.5	Weli I)ia.(in):(/	Z Leng	gth of water colu	umn in well (f	t): <u> </u>	7
		0.01							
2. PURGIN	G DATA: M	lethod: P	erst. P) wg	Str	abilized intake o	lepth: <u>~ ら</u> .	3	
and the second second	and the second second	weil volun	Annual Control of the	•					nin)
		YSI, turbidi							
me	Depth (ft.)	volume removed	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm)	Dissolved Oxygen	p.H. (Std)	ORP (mV)	Turb. (NTU)
	5 30	(liters)			@25°C	(mg/L)			
435	2.73	0	Start			-		73.4	
,40		013	100	21.20	113	3.02	6,56	-	8
:42		0.7	dy ®					`~	<u> </u>
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	Method D/ w		o en energiajo da distribución que entre		
. SAMPLE COLLE	CCTION: Method:	Perst, Vug	S	Sample Time:	02:8
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
6W	JARD-2	EAT	2-12 Auber	14	8270c/EAT
lwell volum	nes for various diameters	s in cal /ft			
0.50" = 0.0		1.00" = 0.041	1.25" = 0.064	:O" — 0 00	
2.00" = 0.10			4.00" = 0.65 6.0		prilitate pro-le problem in a di 100. Sello con 100.
omments:	I mobile to	rue useres le	VL in tiles		
onuncius. \		measure L			
(1	2) allowed.	to rechange	mulley	Ja-0- 4	4.19
	2) allowed -	to recharge	_ mulligy	tues t	0 50 Me/9.
	2) allowed:	to recharge	_ mulligly	tres t	0 5-yle/9
	2) allowed	to rechange	_ mulligh,	tues t	0 5= fle/9
	2) allowed	to rechange	_ multiply	tues t	0 5=fle/9
	2) allowed	to rechange	_ mulligly	tues f	0 5-yle/9.
	2) allowed	to rechange	_ million,	tues f	0 5-jle/9.
	2) allowed	to rechange	_ million,	tues f	0 5-fle/9
	2) allowed	to rechange	_oullegt,	tues f	0 5-gle/9.
	2) allowed	to rechange	_ mulling	tues f	0 5- gle/9
	2) allowed	to rechange	_ mullingly	tues f	0 5- jle/9
	2) allowed	to rechange	_ outliet,	tues f	0 5- gl/9
	2) allowed	to rechange	_ mulling	tues f	0 5- fl/9
	2) allowed	to rechange	_ outliet;	tues f	0 5-gl/9
	2) allowed	to rechange	- melege	tres f	0 5- gl/9
		to rechange			
	2) allowed siMW GW sample form.doc	to rechange		twes f	10:45
		to rechange			
		to rechange			

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Manthener	, VI 03002	Comme	117-4 b#1	Wall S	ample Callesti	on Decord			******
•	ne: JA	RD			ample Collecti Project #: 3 -	A March 1995 To 1995	Well ID:	2-06	<u> </u>
Site Location	n: <u>Be</u>	mainstan	VT		Date: <u> </u>	1-10			
	and the second second	Su-	and the second s			-	Time on Site:	11:00	<u>) </u>
				100 mm					and the second
Description	of measurin	ATA: (from TO	TOPOF	Pipe	Dept	h to water belo	w MP (ft): <u>3</u>	.69 <u>∫</u> 3	.15 da
Total well o	lepth (ft):	5,5	Well I	Dia.(in):	2 Leng	gth of water col	umn in weli (f	t): <u> 1 8</u>	1
Gallons per	foot ¹ :	0.01	Well	volume (gal):_	0.018				
2. PURGIN	GDATA: M	ethod:Re	J. ton	~~ <u>~</u>	Sta	bilized intake	depth: <u>5-3</u>		
		well volum			and the second second	and the second second		and the second second	nin)
		YSI, turbidir							
me	Depth (fl.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
;o\$	3,69	0	stat		Northwestern 1981			terd	12.0
170		٥.5	100	20.02	75	7.72	6.93	64	4
(:[3	<u> </u>	D.8	&y (2)					1	
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		1915年1916年							
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urge Water Dispos	al Method Drum	Comments (e.g. cold	or, odor): <u>೧</u> ೦	ida, n	0000
. SAMPLE COLI	ECTION: Method:	Pemt. Pup	· · · · · · · · · · · · · · · · · · ·	Sample Time:	11-30
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
6W	JAPD-Z	EAT	2-12 Anber	10	8270C/EA]
¹ well volu	mes for various diamete	rs in gal./ft.			
0.50" = 0. 2.00" = 0.				50" = 0.09 00" = 1.47	
			A Processor		
omments:	(i) mobile	to reasure	t VLm	tele	
Comments:	(1) mobile	to reason	e wem	tebe	
Comments:	(1) woble (2) allow	to reasure	echere,	melifle;	Jues to fel
Comments:	(1) woble (2) allow	to reame	echere,	melefle	he to fel 30HCes.
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	(i) woble (ii) allower msWW GW sample form.doc	d wll to a		ime Off Site	
		d well to a			

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Project Nan Site Location Weather Co 1. WATER Description Total well of	onditions: LEVEL DA of measurin lepth (ft):	Ground TAFD ennington Sur 8 ATA: (from TO) g point (MP) ~ S ~ S	, ∨ T ⟨ o ∘ F C) To p . Well I	, ← 十	Depti	2218-3)-10 h to water belo	Well ID: 7 Time on Site:	11:0S	
		ethod:				bilized intake	depth; _~ S_	<u>3 '</u>	
T		well volumYSI, turbidir	and the second second		_(liters) Purge			(ml/r	nin)
ıe	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)
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irge Water Disposa	Method	Comments (e.g. color,	odor):		asserted the second
SAMPLE COLLE	ECTION: Method:			Sample Time:	
			and the second second	omnpie Time	
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Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
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	and the second s				
	Approximation of the second				
lwell volum	nes for various diameter	s in gal /ft			
0.50" = 0.0 2.00" = 0.1			5" = 0.064 1. 0" = 0.65 6.		Angeria Valencia († 1 1
\sim	Alat Co	gled as Pre-	ا المارات الم	1	CL.
omments:) 1000 3ac	# 20 00, 1 to	10 W/C	1 swel	~ 5w,
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STANDARDUCO Form	s\MW GW sample form.doc		Т	Time Off Site	<u>1:3S</u>
STANDARDVCO Form	s\MW GW sample form.doc		т	ime Off Site	1:35

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Montpelie	r, VT 05602	USA					www.	iohnsonco	.com	
Project Na	me: 1	Ground APり			ample Collect		Well ID:	<u> 1-20</u>	<u>3 </u>	
		aingto, V			7,	0/10				
	**	sur 8						•		
		ATA: (from TO		tube						tuda te
		~5.5								ont leve
Gallons pe	r foot¹:	0.01	Well	volume (gal):_	<u>0.04</u> 5					
2. PURGIN	i g data : M	lethod:P	em+. P.	~g	Sta	abilized intake o	depth: \(S \cdot 3	3 ′		
Purge Vol	ume @1	well volum	es: <i>O</i> ,	17	(liters) Purge	e Rate:	100	(ml/	min)	
Parameter	equipment:	YSI, turbidii	meter							•
Time	Depth (ft.)	volume removed (liters)	Flow Rate (mL/min)	Temp (°C)	Spec Cond. (uS/cm) @25°C	Dissolved Oxygen (mg/L)	p.H. (Std)	ORP (mV)	Turb. (NTU)	
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urge Water Disposa	Method Drum	Comments (e.g. col	or, odor): <u>Lt. br</u>	on teulon,	, no odo
. SAMPLE COLLI	ECTION: Method:	Pount, Pr	~} .	Sample Time:	14:35
	galenia.				
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
6 W	JARD-1	EAT	Z-IL glan	14	8270c /EAJ
					Tarana a sa
				4,5,5,4,4	
¹ well volun	nes for various diameter	s in gal./ft.	vitalis III. la seis		
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				en e	
:\STANDARD\CO Form	as\MW GW sample form.doc		тт	ime Off Site	18:25

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THE JOHNSON COMPANY, INC. 100 State Street, Suite 600

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Montpelie	r, VT 05602	USA					www.j	ohnsonco.c	:om
		Edit Gallack Cold.	l Water Monit		ample Collect Project #: <u>3 -</u>	garage and the second	Well ID: P	2-14	·
7.	me: <u>J</u>	•			Table Section 1				
		nnington 1	The state of the s			-10		17.20)
Weather C	onditions:	80°F	<u> </u>				Time on Site:_	11-22	<u>, </u>
		ATA: (from TO				Water and Appear)n /	
Descriptio	n of measurir	ng point (MP)	top of t	vbe_	Dept	h to water belo	w MP (ft): ²	13 /	<u>2.5</u> 7
Fotal well	depth (ft):	\$ · \$	Well I)ia_(in): <u> </u>	ZLeng	th of water col	ımn in well (ft): <u>3-3</u> -	7
		0.07		A CONTRACTOR OF THE CONTRACTOR					
2. PURGIN	NG DATA: M	lethod: Pe	enot. Pu	6	Sta	ibilized intake o	lepth: <u>5.3</u>	<u>'</u>	
Purge Vol	ume @ <u>1</u>	well volum	nes: 0	. 13	(liters) Purge	e Rate: 10	<i>10</i>	(ml/n	nin)
Parameter	equipment:	YSI, turbidi	meter		er William				
ne	Depth	volume	Flow Rate	Temp	Spec Cond.	Dissolved	p.H. (Std)	ORP	Turb.
	(ft.)	removed (liters)	(mL/min)	(°C)	(uS/cm) @25°C	Oxygen (mg/L)		(mV)	(NTU)
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roject Number:					disk ist ist disk visitation as which is
urge Water Dispos	al Method Drum	Comments (e.g. co	lor, odor): Lt. Rno	no tubi	id/vooda
SAMPLE COLL	ECTION: Method:	Penst, p	Se Se	imple Time:	18:30
		·			
Sample Matrix	Chain-of-Custody#	Shipper ID#	Container Qty/type	Preservation	Analytical method/Lab
GW	JARD-1	EAI	2-12 gland	ابو	8270 C / EA
^l well volu	mes for various diameters	s in gal./ft.			
$0.50^{\circ} = 0.0$		and the second of the second second second	or the control of the	0.09	
2.00" = 0.	16 3.00" = 0.32	3.50" = 0.50	$4.00^{\circ} = 0.65$ 6.00	0" = 1.47	
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omments:) tube too ,	nama to m	-aone u	// whi	le juga
		namon to M			
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	c) Allow to		the saple	/5+alid	18:30
	c) Allow to		the saple	/5+alid	18:30
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and the out part	

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

					D)(6				06	19817		METAL		Artefore Son	Ne	atomic state of	dorec	Je	3		M	eko	OTHER		
Sample I.D.	Sampling Date/Time *If Composite, Indicate Both Start & Finish Date/Time	MATRIX (SEE BELOW)	GRAB/*COMPOSITE	574.2 BTEX 574.2 MTBE ONLY B1260B 614 VTICS 4 Digwey FDB DRCP	8021B BTEX HALOS	BOISE GRO MEGRO NAVPH	25 BB	7 17	60158 ORO MEDRO MAEPII Pest 608 PCB 609 Pest 80814 (PCB 8082)	Olt & Grene 1664 TPH 1664	E .	Dissoived Metals (List Below) Total Metals (List Below)			ĕ	TKN NH1 I. Pros	pH T. Rec Calorine	COD PRESSIL TOC	Took Cranse Total Suinse	Reathe Christ. Reather Salvie.	T. Cerroay E. Corr E. Corroan	ENTERCORUS PLATE COUNT		# as Connusees	Notes MeOH: Vial:
5B-16 (10-15)	8/6/10 1047	5	and the same of th		Constitution		X		1X	10,000,000,000,000 a,0)				col constraint		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· vessessies		Carphorately (vi anjani zenanta			Action (as a second second	
SB-16 (25-30)	8/6/10 1044	5	agence.	The second secon			X		X							-			20 volumenture			-		1	and the second s
MW-3D (20-25)	8/2/10 427		6		(and polycomorphisms)		χ'		><		STATE OF THE PARTY	and the second	and the second	pr \$ 1.000.000.00				(magazina)	Ditamen			, Bourson	Acceptable Consideration of Constitution	1	with the second
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MATRIX: A-AIR; S-SOIL; GW-GROUND WATER WW-WASTE WATER PRESERVATIVE: H-HCL; N-HNO ₁ ; S-H ₂ SO ₄ ; I		IXING W	ater;		Name of the Association of the A					***************************************	Newson.		11 a 3003 A 2010							E carpoone			A STREET, LIGHT STREET, STREET		

Project Manager: Danie / Basten	DATE NEEDED: 51/2	<u>waaa Trii</u>	TEHP. °C	METALS: 8 RCRA 13 PP 1
COMPANY: The Johnson Company	QA/QC	REPORTING OPTIONS	ICE? YES No	Other Metals:
ADDRESS: 100 State St. State 608	REPORTING LEVEL A B C	PRELIMS: YES ON NO.		DISSOLVED METALS FIELD FILTERED? Y
CITY: MONTPOSE STATE: VT ZIP: 05602 PHONE: (\$02) 229-4(00 Ext.: /S FAX: (\$02) 229-5876 E-MAIL: DPBO TCOMAIL COM	OR MA MCP PRESUMPTIVE CERTAINTY	ELECTRONIC OPTIONS NO FAX (E-MAIL) (RDF	And the second second second second	Notes: (ie: Special Detection Linits, Billin Southlet Eustrai FCB analysis
OTTE NAME: 50.1 d PROJECT #: 3-7.218-3 STATE: NH MA ME (VT) OTHER:	SAMPLER(S): DOX BO	8/9/10_0532_	1044 Jay Con. RECEIVED BY:	SNOC analysis DEHP (CAS#
REGULATORY PROGRAM: MPDES: RGP POTW STORMWATER OR		na di Franca, i magneta (1905), na anno estro di Santanio, (1905), no estro di Santanio, (1905), no estro di S		SITE HISTORY:
GWP, OIL FUND, BROWNFIELD OR OTHER: QUOTE #: PO #:	The Spring and A Spring to a section of the Spring and the Spring	Date: Tine: Date: Tine:	RECEIVED BY:	SUSPECTED CONTAMINATION: TES, 1 FIELD READINGS:

NG INFO, IF DIFFERENT)

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eastern analytical, inc. 25 CHENELL DRIVE | CONCORD, NH 03301 | Tel. 603.228.0525 | 1.800.287.0525 | Fax: 603.228.4591 | E-Mail: CUSTOMER_SERVICE@EAILABS.COM | WWW.EAILABS.COM

Quote #:

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GR LAB UH ONLY	200	١
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Sample I.D.	Sampling Date/Time *If Composite, Indicate Both Start & Finish Date/Time	MATRIX (SEE BELOW)	GRAB/*COMPOSITE	524.2 524.2 btex	8260B 624 VTICS I, 4 Digeane EDB DBCP	BOZIB BTEX HALOS	BOISB GRO HEGRO HAVFII	AZZOC 425 SVIICS Abn a bn pah	Ξ	BOISB DRO HEDRO HAEPH	PEST 608 P.C.B. 608 Pest 8081A C. P.C.B. 8087.5	OIL & Giense 1664 TPH 1664	TCLP 1311 ABN NEING - VOC PEST HEIB	DISSOLVED MEJALS (LIST BELOW)	TOTAL METALS (LIST BELOW)	75 TOS SPEC COR.	Ex CI F 50, NO, NO, NO,/NO,	BOD CBOD T. Aus.	TKN NH, T. PPSS.	pH T. RES. CREORRE	COD Pressus TOC	Total Cande Total Selfide	Reactive Ceaside - Reactive Social Flasiporit - Igreefort	T. Cessessi E. Cess F. Cessessi	Entencico Hetenotigenic Plate Cobiu			# of Cottanes	mad analysis process in the light more than the state
MW-40 (20-35)	7/25/1008/18		6)			X	10-1100-200-00	a caronini		Caroli Marconson		Last time		especial trans			en endaten		600 600		nikywaly jilikyw		1	Sower
MW-60 (20-25')	<u>7/29/10 06:16</u>	5	6		parience (except				abeli ma		K	Sanger and No.	-Unindin e				September of SEC.			و دره دره دره		(magnitude)	Agricultural de			open de laboration			Sex14/15
MW-600 (30:35")	7/24/10 C領化	5	4			****	enger Coeler-	Giggson and on the State of			$ \lambda $	PACE STREET				electronics	¥	- Accessorement	(Alexande)	Alterity	apair missas	egypung promptered	may/mort street St	greg Newton		erconnice Abbien	receive and other		Soule
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Project Manager: Dan Company: The Schi	77)	7, 7							EDE	D:	Sh				elemento.				EHP		W. Serfer Com.	·c]				RCRA	13 F	'P	FE, MN PB, C
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GWP, OIL FUND, BRO	3-218-3											Date:			TIME:		RE	CEIVED	BY:				Susp	ECTED	CONTAI	OITANIP	N:	<u>. b</u> .:	

RELINQUISHED BY: FIELD READINGS: RECEIVED BY: DATE: TIME: eastern analytical, inc. 25 Chenell Drive | Concord NH 03301 | Tel. 603.228.0525 | 1.800.287.0525 | FAX: 603.228.4591 | E-MAIL CLISTOMER SERVICE MEALLABS COM

professional laboratory services

(WHITE: ORIGINAL

GREEN: PROJECT MANAGER)

For Las Use Ober

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

Annual Contraction of the Contra					Voc			3	V@	(īG.	Мā	TALS		Ī	N@	Re	AN	ΙG	5			ero	OI	JER		
Sample I.D.	*If Col INDICAT START &	PLING /TIME MPOSITE, TE BOTH & FINISH /TIME	Matrix (see below)	G вав/*Сомроѕітв	524.2 524.2 BTEX 524.2 MTDE CAUT 0260B 624 VTICS 1.4 Dellare EDB DGCP 8021B BTEX, HALOS	RO NEGRO MAVPH	B270C 2625 SYTICS AGN A BN PAH	0 11 0	AEPH	PEST 608 PCB 608 PEST 60812	OIL & GREASE 1664 TPH 1664	TCLP 1311 ABN NETALS VOC PEST HERB	, E	TOTAL METALS (LIST BELOW)	TIS TUS	61, Cl. F 50, KO, NO, NO,/NO,	63	TKN NH, T. PHOC.	pH T. Res. Chrosine	COD PARMOLS TOC	Total Course Total Selfide	REACTIVE CYANDE REACTIVE SULFIVE	T. COLIGEN E. COLI	Entracaca Herisonapha Pune Cosni	7877-7421		# of Containers	Notes MeOH Vial 7
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PROJECT MANAGER: Daniel Baston	_ DATE NEEDED: Standard TAT (TEHP.)	"C METALS: 8 I
COMPANY: The Johnson Company ADDRESS: 100 State St. Suite (000 CITY: 1014-peties STATE: VI ZIP: 05002 PHONE: (802) 229-4(000 Ext. FAX: (802) 229-5876 E-MAIL: DPB@ JCOMAIL. COM	QA/QC REPORTING OPTIONS REPORTING LEVEL PRELIFS (YES OR NO IF YES: FAX OR (PDF)	OTHER METALS: DISSOLVED METALS NOTES: (IE: SPECIAL SA 70C PCB 1666
SITE NAME: SOLO A PROJECT #: SOLO A STATE: NH MA ME QT OTHER:	SAMPLER(S): Warren Dame 802-223-9 RELINQUISHED BY: DATE: THE: RECEIVED BY:	1502 Congress Delim 1668A (Analyti
REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER OR GWP, OIL FUND, BROWNFIELD OR OTHER: OUOTE #: PO #:	RELINQUISHED BY: DATE: TIME: RECEIVED BY:	SITE HISTORY: C SUSPECTED CONTAI FIELD READINGS;

Page 239 of 244

professional laboratory services

(WHITE: ORIGINAL

RELINQUISHED BY:

GREEN: PROJECT MANAGER)

TIME:

RECEIVED BY:

13 PP FE, MN Pa, Cu IELD FILTERED! 🗼 YES ETECTION LIMITS, BILLING INFO, IF DIFFERENT)

FIELD READINGS:

eastern analytical, inc. 25 Chenell Drive | Concord, NH 03301 | Tel. 603,228,0525 | 1.800,287,0525 | Fax: 603,228,4591 | E-Mail: Customer, service@eailabs.com

DATE:

professional laboratory services

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

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SAMPLE I.D.	SAMPLIN DATE / TII *IF COMPO INDICATE B START & FIR DATE / TII	IG ME DSITE, BOTH NISH ME	Matrix (see below) Grab/*Composite			MEGRO MAYPH	SS SVITCS DE FEET	BOUSD DRO NEDRO NAEPH Pest 400 PCB 600 Pest 8001A (PCB 6007)	OIL & GRANE 1664 TPH 1664	TCLP (31) ABN METALS VOC PEST NERS	DISSOLVED METALS (LIST BELOW)	 	٠ ا	BOD (BOD T, ALC	IAM AND L. FED. DH T. AES. CRLORINE	1	TOTAL CKANDE TOTAL SULPUE	Reactive Crande Reactive Solvide Flashform Idmirability	I. Courosh E. Cou F. Courosh	Entregeord Hetelographic Plate Cosat			# of Containers	Notes MeOH Vial #
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MATRIX: A-AIR; S-SOIL GW-GROUND WA WW-WASTE WATER PRESERVATIVE: H-HCL; N-HNO; S-H ₂ SO ₄	NTER: SW-SURFACE WATER;	DW-Drinki	ng Water;		4	34057	(0)	4)													and the second party of th	New		

PROJECT MANAGER: Down Bestur	_ DATE NEEDED: 55	endard TAT	TEMP. °C	METALS: 8 RCRA 13 PP FE, Mn Pb, C
COMPANY: The Tolinson Co ADDRESS: 190 14-1654, Clute 600	QA/QC	REPORTING OPTIONS	ICE? (YES) No	OTHER METALS:
CITY: Alexander State: State: 219: 056.02	REPORTING LEVEL B C	PRELIMS: YES DR NO IF YES: FAX OR (PDF)		DISSOLVED METALS FIELD FILTERED? YES NO
PHONE: 802-229-4600 Ext.	OR MA MCP	ELECTRONIC OPTIONS (NO FAX) (E-MAIL) (PDF)	JO EDD EOUIS	Notes: (IE: Special Detection Limits, Billing Info, If Differen
E-MAIL DER C JCOMAN. COM	PRESUMPTIVE CERTAINTY	NOTAN (C-TIRIC) (TOT)	L40)3	PERS - ILLEN - CHICAGO BY HEECH
SITE NAME: TARD PROJECT #: 3-2218 - 3	SAMPLER(S): LAJOSTON	Derry 807 - ~9-1-10 10/37 ;	<u> 273-9592-</u> Blooms 722	mother of 10,500 (sib-contract of
STATE: NH MA ME (VT) OTHER: REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER OR	RELINQUISHED BY:		CEIVED BY:	House Term
GWP, OIL FUND, BROWNFIELD OR OTHER:	RELINQUISHED BY:	DATE: TIME; RI	CEIVED BY:	SITE HISTORY: Composition facility SUSPECTED CONTAHINATION: PCB / DEEN B
Quote #: PO #:	RELINQUISHED BY:	DATE: TIME: RE	CEIVED BY:	FIELD READINGS:

(WHITE: ORIGINAL

eastern analytical, inc. 25 Chenell Drive | Concord, NH 03301 | Tel. 603.228.0525 | 1.800.287.0525 | Fax: 603.228.4591 | E-Mail: customer_service@eailabs.com

GREEN: PROJECT MANAGER)

CHAIN-OF-CUSTODY RECORD

FOR LAB USE ONLY

Page _____ of _____ BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS. Micro OTHER INORGANICS SVOC TOP METALS HRS Reference #65 HAVFH 1664 TCLP 1311 ABN HERIS WOC PEST HER DISSOLVED HERIS (LIST BELOW) 6015B DRO MEDRO MAI PEST 608 PCB 608 PEST 8081A CPCB 8082 OIL & GREAT 1664 TPH 16 SAMPLING TOTAL METALS (LIST BELOW) T. Pess DATE/TIME TSS TDS S *IF COMPOSITE. T. Res. (≢ INDICATE BOTH _<u>`</u>§ TP#8100 START & FINISH SAMPLE I.D. ± # € 8 8 ₫ DATE !TIME gran habed war I 4-1-10 Cal G The second second (4.44) 14 7 60 To the wife 14.11 0-10 the sel on to 17:45 WINTED 1. Las 10:15 11112 646 12:17 Mit and we before 7:40 66 6 1-2-41 9-1-10 61.72 Oko Mw. 37 -10 4.75 h/2 7 6 tu 10:27 66 m-1-3 14:40 64 60-1 Kridd dissilved in MATRIX: A-AIR; S-SOIL; GW-GROUND WATER; SW-SURFACE WATER; DW-DRINKING WATER $m \cup 13$ WW-WASTE WATER PRESERVATIVE: H-HCL; N-HNO;; S-H;SO4; Na-NaOH; M-MEOH \ \ DATE NEEDED: PROJECT MANAGER: Design Saster METALS: 8 RCRA 13 PP TEHP. COMPANY: The Johnson Co (CE?) YES No OTHER METALS: REPORTING OPTIONS QA/QC ADDRESS: 100 State State Couls Cod PRELIMS: YES OR NO REPORTING LEVEL Marcho elser State: VT ZIP: 55602 C В IF YES: FAX OR (PDF 202-279-4000 Ext. OR PHONE: ELECTRONIC OPTIONS MA MCP Eouis NO FAX / E-MAIL / PDF PRESUMPTIVE CERTAINTY TIPAG TOMAIL, COM E-MAIL: JA40 SAMPLER(S): Warren Daven 802-223-4502 SITE NAME:

FE. MN PB. Cu

DISSOLVED METALS FIELD FILTERED?

YES NOTES: (IE: SPECIAL DETECTION LIMITS, BILLING INFO, IF DIFFERENT)

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NOTES MEOH VIAL #

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DEB : 1668 A - chilorinated bigher.

September by HAGE/HAMS CALLER ALLASIES SERVICES Thurston, The (MW-3 only)

SITE HISTORY:

Suspected Contamination: $Fe^{iS_{+}} \cap FK_{0}$

FIELD READINGS: PSW-3, 50, 6, 60 DV-1, DV-2 Woulder Co. Kick PCB's

eastern analytical, inc. 25 CHENELL DRIVE | CONCORD. NH 03301 | TEL. 603.228.0525 | 1.800.287.0525 | FAX: 603.228.459L | E-MAIL CUSTOMER, SERVICE OF ALLABS COM (WHITE: ORIGINAL GREEN: PROJECT MANAGER) * *

DATE:

DATE:

professional laboratory services

PO #:

GWP, OIL FUND, BROWNFIELD OR OTHER:

3-2218-3

REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER OR

MA ME /VT

Project #:

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4-2-10 1/109 Toman

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13 coduco

The Johnson Company, Inc. 100 State Street, Suite 600 Montpelier, VT 05602

Phone: (802) 229-4600 Fax: (802) 229-5876

www.johnsonco.com

		·-				YSI CALIB	RATION SI	HEET	Jand	ite 3-2	218-3			
Equipment ID:	<u> </u>	F*4_		·			Serial #	0767	2008 A					
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Expiration Da	te		4-11	4-11	12-10				1-11	8-11			_	2-11
Date	Time	Initials	pH 4.01	pH 7.00	pH 10.00	Certified thermometer Temp. (°C)	YSI Temp. (°C)	Specific Cond. mS/cm	Specific Cond. 1.413 mS/cm @ 25°C	ORP-Zobell Solution (200-275mV)	Barometric Pressure (mmHg)	100% D. (mg/L)	(%)	Zero O ₂ Solution (mg/L)
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The Johnson Company, Inc. 100 State Street, Suite 600 Montpelier, VT 05602

Phone: (802) 229-4600 Fax: (802) 229-5876

wiontpener,	¥ 1 U30U4					www.johnsonco.com
				TURBIDITY	METER CAL	IBRATION SHEET Jard site 37:3-2218-3
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CHAIN-OF-CUSTODY RECORD

FOR LAS USE ONLY

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CITY: MONTHULE PHONE: (80Z) 229-1 FAX: (80Z) 229-5 E-MAIL: DPBO 300N	STATE: VT	ZIP: 《 Ext.:	×57	2002	PR	A ESUM	C MA IPTIV	B Dr MCI e Ce	o RTAII			F YES: Elec No Fa)	S: YES FAX TRON	OR P HC O -Mail	DF PTIO PI	DF	Equis					13 to 1	pristing	laga yangan M		D FILTEF ECTION L	gitantigiri	YES BILLING	No Info, If Different)
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	BROWNFIELD OR OTHER:		processing a beside	a angarang makanang di danag magaka	R	// ELMQ	(a)/ OUISH	ED B	∕/^ Υ:		DATE:		and the second	ime:	1	REC	()./2/ Elved I	<i>- 22</i> }y;	L.d.	Estate Security		100000				<i>204</i> Ioh: <u>≯</u>	Lucia States	Carrie Comm	<u>Cachechui</u>
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eastern analytical, inc. 25 CHENELL DRIVE | CONCORD. NH 03301 | TEL: 603.228.0525 | 1.800.287.0525 | FAX: 603.228.4591 | E-MAIL CUSTOMER SERVICE@EAILABS.COM WWW.EAILABS.COM professional laboratory services

(WHITE: ORIGINAL

GREEN: PROJECT MANAGER)